The Mining Journal
AND COMMERCIAL GAZETTE.

No. 34.—Vol. II.] LONDON: SATURDAY, APRIL 16, 1836. [Price 7d.

ON SALE, at the Office of CHARLES MANN, Stock and Share Broker, 7, Old Broad-street:—

SHARES in several of the best Mining Companies of Cornwall that are now dividing profits.

SHARES in the Iron Railways, Gas, Fire, and Life Insurance Companies, &c.

Likewise STOCKS and SHARES of the UNITED STATES, paying large and safe dividends.

SHARES IN VALUABLE CORNISH MINES FOR SALE, THAT ARE PAYING LARGE DIVIDENDS.

For particulars apply (if by letter, post paid) to Mr. William Trenery, junior, from Redruth, Cornwall, at Innis's, Queen's Arms Tavern, Cheapside, in the city of London, between the hours of ten and six.

London, April 15, 1836.

TO PRACTICAL MECHANICS AND ENGINEERS.—WANTED, in an extensive Iron Works, a competent person to take the charge and general superintendance of the Steam Engines, and Mills, and Machinery in use in that Establishment. A liberal salary will be given to a person who can produce the requisite testimonials. Letters addressed, post-paid, to G. R. T., Union Hotel, Charing-cross, London, on or before the 1st day of May, will meet with due attention.

A VERY VALUABLE TIN and COPPER MINE in the county of Cornwall TO BE DISPOSED OF; immediate attention will be paid to applications (post paid) addressed to A. B., 27, Edmond's-place, Aldersgate-street.—April 15.

MARQUISE AND HARDINGHEN IRON, COAL, AND MARBLE COMPANY.

The applicants for Shares in this undertaking are respectfully informed that Mr. Henry English has this day WITHDRAWN from the Direction of the affairs of the Company.

37, New Broad-street, April 15, 1836.

PENOLES GOLD MINING ASSOCIATION.—Notice is hereby given, that a HALF-YEARLY GENERAL MEETING of the Proprietors will be held at the North and South American Coffee-house, on MONDAY, the 2d of May, at two o'clock precisely.

Office, 37, New Broad-street, London, April 2. GEORGE MORGAN, Secretary.

WEST TRESAVEAN MINING COMPANY.—The Directors hereby give Notice, that the ANNUAL MEETING of the Shareholders of this Company will be held at the City of London Tavern, Bishopsgate-street, on THURSDAY, the 28th day of April, at twelve for one o'clock precisely.

19, Austin-friars, April 6. HENRY TRIBE, Secretary.

TREGOLLAN COPPER MINING COMPANY.
WHEAL CHANGE MINE.

No applications for Shares in this Company can be received from London applicants after Monday next, the 18th inst., nor from country applicants after Wednesday, the 20th inst. All letters are to be addressed to the Directors (post paid) at the Office, No. 14, Bishopsgate-street Within.

ROYAL COPPER MINES OF COBRE ASSOCIATION.—Notice is hereby given, that the FIRST GENERAL MEETING of the Proprietors of this Association will be held at the house of the Company, 26, Austin-friars (in conformity with the deed of settlement), on TUESDAY, the 26th day of April inst., at One o'clock precisely. By order of the Court of Directors,

April 11. WILLIAM LEEKIE, Secretary.

TREWOLVAS COBALT, TIN, AND COPPER MINING COMPANY.—No application for shares in the Capital Stock of this Company will be received after MONDAY, the 18th inst.

Office, 12, Pancras-lane. C. F. KIRKMAN, Secretary.

GREAT WHEAL PROSPER MINING COMPANY.
Capital £80,000, in 16,000 shares of £5 each.
Deposit £1 per share.

Applications for Prospectuses and Shares to be made to the Secretary till Monday, the 25th inst. HENRY TRIBE, Secretary.

19, Austin-friars, April 11.

ROYAL POLBEROU CONSOLS MINING COMPANY.—Notice is hereby given, that the ANNUAL GENERAL MEETING of the Shareholders of this Company will be held at the George and Vulture Tavern, St. Michael's-alley, Cornhill, on SATURDAY, April 30, at One o'clock precisely.

37, Old Broad-street, April 12. T. V. WILLIAMS, Secretary.

HARMONY and MONTAGUE CONSOLIDATED TIN and COPPER MINING COMPANY.—Notice is hereby given, that the Directors have made a CALL of ONE POUND per share of the Capital Stock of the Company, which is required to be paid at the Office of the Company on or before the 9th of May next. The certificates of shares must be produced, in order that the payments may be recorded thereon. C. F. KIRKMAN, Secretary.

18, King's Arms-yard, April 16.

ST. JOHN DEL REY MINING COMPANY.—The SIXTH ANNUAL GENERAL MEETING of the Proprietors of the St. John del Rey Mining Company will be held at the Company's Office, No. 8, Tokenhouse-yard, Lothbury, on THURSDAY, the 5th day of May next, at One o'clock precisely.

At this Meeting two Directors will be elected in the place of two Directors who retire, but who are eligible to be re-elected.

J. LUCKOMBE, Secretary.

No. 8, Tokenhouse-yard, Lothbury, April 5.

HIBERNIAN MINING COMPANY.—Notice is hereby given, that the ADJOURNED HALF-YEARLY MEETING of the Shareholders of the Company will be held at their Offices, No. 6, Austin-friars, London, on Wednesday, the 11th day of May next, at 12 o'clock precisely.

By order of the Board of Directors,
HENRY PORTER, Secretary.

Company's Offices, 6, Austin-friars, London, April 8.

ULSTER CANAL COMPANY.—Notice is hereby given, that the ANNUAL GENERAL MEETING of the Shareholders of the Company will be held at the Company's Offices, 6, Austin-friars, London, on Wednesday, the 4th of May next, at 11 o'clock in the forenoon precisely, according to the provisions of the Acts of Parliament for general purposes, for the election of two members of the committee of management, in the places of two members who have resigned, and for the election of four members of the committee in the places of four members who go out by rotation, but are eligible to be re-elected.

HENRY PORTER, Clerk of the Company.

Austin-friars, London, April 6.

EAST CORNWALL SILVER MINES.—We, the undersigned, from circumstances which have recently occurred, vitally affecting our interests, and for the protection of the Shareholders at large, deem it to be our duty to invite all the Shareholders to meet at the CITY OF LONDON TAVERN, Bishopsgate-street, at TWELVE for ONE o'clock, on TUESDAY, the 19th of APRIL inst., for the purpose of advising as to the expediency of forwarding a REQUISITION to the DIRECTORS to assemble a Special General Meeting of the Shareholders at the earliest possible period.

FRAS. ATKINSON.
(Signed) HENRY GILBARD, Jun.
April 15, 1836. JAS. HUTCHINSON.

EUROPEAN GAS COMPANY.—The Directors hereby give Notice, that such shares on which the Second Instalment of £2 10s. per share remains unpaid, will be declared FORFEITED on or after the 18th of April inst., unless the arrears thereon be paid antecedent to that day to Messrs. Ladbrokes, Kingscote, and Co., the Bankers of the Company.

G. MERLE, Secretary.

BRITISH TIN MINING COMPANY.—In accordance with a resolution passed at the Annual General Meeting of the above Company, held at the George and Vulture Tavern, Cornhill, on the 30th ult., the Directors do hereby make a CALL of FIVE SHILLINGS per share, and request that the said Call be paid into the Bankers of the Company, Messrs. Stone, Martins, and Stones, on or before Monday, the 25th inst. On producing the Bankers' receipts, together with the Scrip shares, at the office of the Company, 22, Crutched-friars, the Instalment will be indorsed thereon.

22, Crutched-friars, April 13. JOHN SANDERS, Secretary.

BOLIVAR MINING ASSOCIATION.—Notice is hereby given, that the Managing Trustees of the Bolivar Mining Association have this day made a CALL of TWO POUNDS on each of the Auxiliary Shares in the said Association, and that such Call of Two Pounds per share is to be paid to the Bankers of the Association, Messrs. Sir Charles Price, Bart. and Co., King William-street, on or before Thursday, the 19th day of May next. It will be necessary that the Scrip certificate, with the Bankers' receipt, be brought to the office for the purpose of having the payment duly certified.

By order of the Managing Trustees,

9, Austin-friars, April 14. ALEXANDER ALLEN, Secretary.

THE MINING REVIEW.—The forthcoming Number of this work will unavoidably be delayed until the 1st of May, in consequence of the numerous Wood-cuts required for illustrating several Original Papers; the publication of the Mining Journal (directing its attention particularly to Public Companies) having determined the Editor to render the MINING REVIEW more exclusively devoted to Science, and, so far as is practicable, to render it unique by numerous Engravings and Wood-cuts.

Contents of No. VII. of the Mining Review:

Original Communications—On Mining Companies—Descriptive Notice of the Consolidated and United Mines—Comparative View of Celebrated Mines in Europe and America—Parallel between the British and Continental Methods of Copper Smelting—On the Geological Position of Rocks, and on the Separation of Gold from the Ore at Gongo, in Brazil—On the System of Amalgamation pursued at the Hacienda of San Pedro Nolasco, in Capualpam—Address.—Miscellanea—Notices of Recent Publications—New Companies for Working Mines—Proceedings of Public Companies—Correspondence from Mining Districts—Appendix.

THE MINING JOURNAL AND COMMERCIAL GAZETTE,

The only Newspaper exclusively devoted to Geology, Mineralogy, and Metallurgy; combining therewith Reports of the Proceedings of Public Companies, Correspondence from the Mining Districts, Sales of Ores, Prices of Shares, Mines, Railways, Canals, &c., with Parliamentary Summary, London Gazette, and much original and interesting Scientific Intelligence, &c., is published every Saturday, and may be had of all newsvenders in town and country.

Office, 12, Gough-square, Fleet-street, London.

Just published, in one sheet royal,
(Printed by Messrs. Vizetelly, Branston, and Co.)

MESSRS. CLARKE and LEWIS'S NEWSPAPER LIST, being an accurate COLOURED CHART of the POLITICAL STATE of the KINGDOM, as exhibited through the opinions of the METROPOLITAN and COUNTRY PRESS. At one view will be seen the actual demonstrations of political sentiment on the sides of "Conservatism" and "Liberalism."

To Advertisers generally this LIST will secure an essential service, by guiding them in their selections of mediums of publicity to the members of each division of politics.

To be had of Messrs. CLARKE and LEWIS, ADVERTISEMENT AGENTS, 4, Crown-court, Threadneedle-street.

*** Those Country Newspapers that have not received a copy of this List, in consequence of the expense of transmission, will, upon an application being made on their behalf at the office, in Crown-court, be furnished with one.

Caution.—The valuable information contained in this List having been collected at considerable labour and expense, the proprietors claim a copyright therein, and caution all persons from pirating the same.

UPTON AND ROBERTS' MINER'S PATENT SAFETY LAMP.

The security of this Lamp has been fully proved by the Chemist and the Coal Miners; and before the late Committee of the House of Commons, "on Accidents in Mines." As the tests were such as neither the Davy Lamp, nor any other professed Safety Lamp, could sustain, no uncertainty can possibly remain on this essential point. It can therefore be recommended, with well-founded confidence, for all the important uses of a Miner's Lamp. There are no exceptions. The value of unlimited protection, where destruction has so frequently followed the want of the least portion of what is necessary, will no doubt be duly appreciated by all who possess common sense, and want not common humanity. And, surely, none will henceforth take the awful responsibility, by enforcing the use of any known insecure Lamp, (such as Sir Humphrey Davy's,) of exposing the lives of their fellow-creatures to a dreadful, and now, happily, uncalled-for peril.

Orders received by William Upton and Co., Queen-street, Cheapside, London; Mr. Robert Watson, Newcastle-on-Tyne; and Messrs. T. Smith and Sons, Birmingham; by whom the trade will be supplied.

P. S.—This Lamp is simple in its construction and management, and gives three times the light of the Davy Lamp.

SCHAUFFELEN'S PATENT HOT-AIR FURNACE FEEDER.

By the use of this apparatus, the principle of feeding fires with hot air (hitherto confined to blast-furnaces only), is now extended to all enclosed fire-places, without any aid of mechanical power; the temperature of the feeding air being raised by absorbing a portion of the waste heat which usually escapes through the chimney; a SAVING OF FUEL is thus effected of 20 to 25 per cent. The apparatus is most simple in its construction—not liable to damage or derangement—erected at a small expense, and its operation is not subject to any attendant disadvantage whatever. It is applicable to the Boiler Fires of all Steam-Engines, the Furnaces of Breweries, Distilleries, Water-works, Gas-works, Refiners, Potteries, Brick-kilns, Glass-houses, and, generally, to all kinds of enclosed Fires. A model may be seen at the Gallery of Practical Science, in Adelaide-street, Strand; and an Apparatus, in daily operation, inspected (by permission of the Proprietors) at the College Wharf Saw-Mills, Belvidere-road, Lambeth. Many of these Apparatus have been erected during the last three years on the Continent—are now in full operation, and testimonials of their efficacy are adduced.

A descriptive Treatise on this System may be had, by applying to Mr. J. H. Florence, 8, New Basinghall-street, to whom all applications for licenses under this patent are to be addressed.

WEST INDIA AGRICULTURAL COMPANY.—
Capital, £500,000, in 10,000 Shares of £50 each. Deposit £2 per share.

Trustees (with power to add to their number),

The Right Hon. the Earl of Mountnorris, William Alexander Mackinnon, Esq. M.P., William Archibald Campbell, Esq.

Bankers—Messrs. Glyn, Halifax, Mills and Co., 67, Lombard-street.

Solicitor—B. Lumley, Esq., 6, Quality-court, Chancery-lane.

Detailed estimates and prospectuses have been prepared for the information of the public, and may be obtained from the Solicitor, and at the Office of the Company, 17, Ironmonger-lane, Cheapside.

Applications for Shares may be addressed to the Solicitor, B. Lumley, Esq., or to the Secretary, at the Office of the Company, where further information may be obtained daily, from eleven to four o'clock.

STAFFORDSHIRE.—TO BE SOLD BY AUCTION, by Messrs. E. and C. ROBINS, at the SWAN HOTEL, in WOLVERHAMPTON, on WEDNESDAY, the 27th day of APRIL, 1836, at Three o'clock in the afternoon, and at the KING'S ARMS INN, in BILSTON, in the County of Stafford, on THURSDAY, the 28th day of APRIL, at Eleven o'clock in the forenoon, in FIFTY-FOUR LOTS, the Manor or Lordship of BRADLEY, with its Rights, Royalties, and Appurtenances, the celebrated

BRADLEY IRON WORKS,

situate at Bradley within Bilston aforesaid, consisting of Coal and Iron Mines, Furnaces, Foundries, Potteries, Forge, Rolling and Slitting Mill, House for the Residence of a Principal or Manager,

ONE HUNDRED AND TWENTY HOUSES

for Agents, Clerks, and Workmen, and every requisite for an extensive Iron Manufacturing Establishment: also several Lots of Building Land, the whole containing about

ONE HUNDRED ACRES OF LAND,

of which the greater part are FREEHOLD of INHERITANCE, and the remainder LEASEHOLD for a long term of years, subject to a small reserved Rent, besides MINES under about Eight Acres of adjoining Land, held for the residue of a term of Fourteen Years, commencing at Lady-day, 1835: also

TWO ESTATES

in the Parishes of WEDNESBURY and DARLASTON, in the said County of Stafford, with valuable MINES under them.

This Property is in the midst of that part of Staffordshire where the Iron Trade is concentrated and carried on to the great extent for which it has long been distinguished. These well-known works were established by the late John Wilkinson, Esq., Iron Master. They are in effective and full operation, partly by his family and partly by lessees, but owing to some recent domestic changes they are now submitted to public competition. The Property is most eligibly situated as to Roads and Canals, by which it is intersected in various directions. The present flourishing state of the Iron Trade, with every prospect of its continuance, contributes to enhance the value of this important concern to any person or company engaged or desirous of embarking in the Iron Trade, in works of the first celebrity, and capable of being increased to almost any extent.

Mr. John Dunning, the Agent at the Bradley Works, will show the Property, from whom printed particulars, with Lithographed Plans, may shortly be had, and also at the office of Messrs. Edge and Parker, Solicitors, Manchester; Mr. Corser, Solicitor, Wolverhampton; Messrs. Grazebrook and Guest, Solicitors, Stourbridge; Messrs. Taylor, Turner, Sharpe, and Field, 41, Bedford-row, London, and Messrs. Pitchett and Wagstaffs, Solicitors, Warrington.

GLAMORGANSHIRE.—To be Let on Lease,
(Fourteen Miles from the improving sea-port Town of Cardiff,)

ONE THOUSAND TWO HUNDRED ACRES
(In a ring fence,)
OF HARD BITUMINOUS COAL,

Mostly level free, and now partly open, with Tramroad and Canal communication to the Port, where it could be delivered at about 5s. 9d. per ton, including royalties, tonnage, haulage, interest of capital, (which would not exceed 5,000l. to bring down 200 tons per day,) and all other charges.

There are Eighteen Workmen's Houses, Agent's House, Smitheries, and other conveniences attached. The situation would be favourable to Manufactories requiring good and cheap Coal, coming on the spot about Four Shillings per Ton. Fifty Tons per day may be got immediately, 100 Tons in less than six months, and 200 Tons in less than twelve months.

There is a river running through the middle of the Property, with about twenty feet perpendicular fall. There are good situations for Powder Mills, Pyroligneous Acid Manufactories, &c.; the country abounding with Wood, Splendid Quarries of Stone for Building, and good and cheap Lime.

None but persons of known responsibility will be treated with. Apply, personally, to Mr. Gregory, Solicitor, 17, Clement's Inn, London; or Mr. E. P. Richards, Solicitor, Cardiff, who will appoint a person to show the Premises.

REDRUTH UNITED TIN and COPPER MINING ASSOCIATION.—The period having expired upon which the Third Instalment of Ten Shillings per share became payable, Notice is hereby given, that such Scrip shares on which the said Instalment shall remain unpaid after the 27th instant, will then be positively forfeited.

W. MILLS MIDWINTER, Secretary.

21, Lombard-street Chambers, Clement's-lane, April 13.

FORDA and KIRLAND COPPER MINES, near BODMIN.
Capital £12,500, in 500 shares of £25 each. First deposit £5 per share.

Applications for the remaining shares to be made to Messrs. Whishaw, 1, South-square, Gray's-inn; Mr. Willett, 18, Essex-street, Strand; and Mr. George Gosch, Bodmin, where prospectuses and full information may be obtained. As it is intended that the whole capital to be subscribed shall be actually employed in working the Mines, adventurers will be restricted from transferring their shares within twelve months from the date of the deed of settlement.

PHŒNIX AND PROTECTOR FIRE OFFICES.—The Directors of these Offices beg to inform the public, that the Business and Interests of the two Companies being now united under an arrangement made with the proprietors respectively, all the Offices of the two Companies will remain open, for the granting and renewing of Fire Insurances.

Phœnix Policies and Receipts will henceforth be issued to the Parties hitherto insured with the Protector, and no extra expense of any kind will attend the exchange of Protector for Phœnix Policies.

The Directors of the concern thus united will feel obliged to persons insured in the Protector Office for the favour of an early transfer of their Insurances as they severally expire, signifying any alterations that they may wish to effect in the same.

*** Farming Stock is insured without the average clause.

METROPOLITAN NEWSPAPER COMPANY.—The Trustees and Directors have the gratification of announcing to the shareholders, that they have been enabled to effect arrangements of the most advantageous nature in aid of the object for which the Company has been established, both as regards the extent and variety of talent to be employed, and the completeness and efficiency of the mechanical department; and they are in consequence at liberty to announce, that the first number of the CONSTITUTIONAL will be published on MONDAY, the 23d day of May next. J. E. PUDDICK, Secretary.

14, Charlotte-street, Bloomsbury, April 11.

METROPOLITAN IMPROVED & EXPEDITIOUS PUBLIC CONVEYANCE COMPANY.

The holders of Bankers' Receipts for the first Deposit, are requested to attend and exchange them for Scrip Certificates, at the Office of the Company.

No Deed or other document is required to be signed upon taking up the Scrip, and the same is made in favour of the bearer.

By order of the Board,

Office, 3, Bury-court, St. Mary-Axe. James Augustine Juckes, Sec.

N.B. All shares upon which the Deposit shall remain unpaid after Saturday next will become absolutely forfeited, and be immediately allotted amongst the numerous other applicants.

CALCUTTA AND SAUGUR RAILWAY AND HARBOUR COMPANY.
TO IRON MASTERS.

The Directors of the above undertaking are ready to enter into a CONTRACT for the supply of about 70,500 yards of PARALLEL MALLEABLE IRON RAILS, of the weight of about 50lbs. per yard, and also for the like number of CAST IRON CHAIRS, of about 20lbs. weight, each with a corresponding number of keys and pins. For further particulars apply to George Landmann, Esq., No. 4, Great East-cheap. No tender will be attended to which is not in strict conformity with the terms of the specification; and the Directors do not pledge themselves to accept the lowest tender.

Offices, No. 7, Birchin-lane, April 9.

KENT RAILWAY COMPANY, from London, over the Greenwich Railway, via Dartford, Gravesend, Strood, Rochester, Chatham, Sittingbourne, Feversham, Canterbury, Sandwich, and Deal, to Dover, with Branches to Maidstone, Sheerness, and Ramsgate.

Capital £2,000,000, in 40,000 shares of £50 each. Deposit £2 per share.

The promoters of the above undertaking are in negotiation with the Directors of the London and Gravesend, and London and Dover Companies, for transferring their interest and property to this Company.

The importance of this line, in a national as well as private point of view, must be obvious to all.

The following gentlemen are appointed Provisional Directors in London:—

Lieut.-Col. Sir A. L. Hay, M.P., K.C.S.

Peter H. Fleetwood, Esq., M.P.	Charles Perkins, Esq.
William Pinney, Esq., M.P.	Thomas Philpotts, Esq.
O. T. Alger, Esq.	Lieut.-Col. Sherrett
Wm. Borradaile, Esq.	Henry Short, Esq.
John Brothers, Esq.	Rowand Rowald, Esq.
George Money, Esq.	John Twells, Esq.
John Moxon, Esq.	Lieut.-Col. Utterton
Edward Hughes, Esq.	George Walter, Esq.
Robert Page, Esq.	John Yates, Esq.

Bankers—Messrs. Spooner, Attwoods, and Co.

Secretaries—William Green, Esq., and Colin Smith, Esq.

Applications for shares to be made to the Secretaries, 70, Cornhill.

THE STEAM MAIL and STAGE-COACH COMPANY on COMMON ROADS, for the information of the Public, insert part of their Prospectus, viz., The engineer rejects, in the construction of his engine, long tortuous pipes, which occasion high pressure at the boiler end, and low pressure at the entrance to the engine; rejects absolute reliance on pumps to keep the boiler full, and will materially lessen friction thereby; rejects revolving boilers and cranks subjected to the dash of the road; rejects horizontal pistons, which grate on the under edge; and, above all, he rejects the vision that lightness of structure becomes necessary in the construction of a steam carriage, a van, or a drag, when a twenty horse power is as easily obtained as a four. The Company need not revert to the various patent boilers of their engineer, nor their principles, now in general use; but they can say with confidence, that the new boiler, intended for the present mail coach, will vie with the most effective, and be more easily cleansed, without the possibility of burning, or being without water, which was the main evil of locomotion on common roads. The Company possess extensive workshops in the centre of the city of London, with tools, and every convenience which money could procure or business require, which the trustees presume is a guarantee for honourable intentions on their part, and a proof of their conviction of complete success.

Capital £100,000, in £20 shares; but on no account will more than £1 per share be required until the whole plan be realised, which will furnish a mail coach guaranteed to travel twenty miles per hour, and a van to travel twelve miles, being the minimum of motion.

Applications for Prospectuses or Shares to be made (post paid) to the Secretary, at the Company's office, 6, Devonshire-square, Bishopsgate-street.

MARQUISE AND HARDINGHEN IRON, COAL, AND MARBLE COMPANY.

Offices—26, Lombard-street; and 37, Great Marlborough-street.

Capital £250,000, in 10,000 shares of £25 each. Deposit £5 per share.
(Of which 6,000 have been taken by the proprietors, and others on the spot.)

Trustees and Directors.

William Alex. Mackinnon, Esq. M.P.	H. C. Bakeyne, Esq.
Frederick Polhill, Esq. M.P.	Thomas Alison, Esq.

Bankers in London.
Messrs. Ladbrokes and Co., Bank-buildings.

Bankers in France.
De Rothschild, Frères, Paris. | Messrs. A. Adam and Co. Boulogne.

Engineer—Joseph Gibbs, Esq.

Superintendent—Sir James Gardiner, Bart.

Solicitor—Mr. Wingfield, 37, Great Marlborough-street.

Every information may be obtained by applying at the office of the Company, 26, Lombard-street; or to Mr. Wingfield, the Solicitor, at his office, No. 37, Great Marlborough-street, between the hours of ten and four.

Agents in the country.

Bath—R. Cocks, Esq.	Manchester—S. Thorpe, Esq. and Messrs. Morris Brothers
Birmingham—J. Green, Esq.	Norwich—Roger Kerrison, Esq.
Bristol—Messrs. Bradley and Barnard	Richmond—— Norris, Esq.
Cardiff—Elijah Waring, Esq.	Swansea—— Stone, Esq.
Cheltenham—J. Stokes, Esq.	Wimbourne—J. Fryer, Esq.
Gloucester—G. Brown, Esq.	Yarmouth—T. Pitts, Esq.
Liverpool—R. J. King, Esq., and R. L. Miller, Esq.	

PROPOSED EXTENSION OF THE LAUNCESTON AND VICTORIA RAILWAY TO PLYMOUTH.

The Directors of the Duke of Cornwall's Harbour, and Launceston and Victoria Railway Company, have the satisfaction of informing the public that, in compliance with an unanimous resolution, passed at a General Meeting of the Shareholders of that Company, on the 6th instant, arrangements are now in progress for EXTENDING their RAILWAY FROM LAUNCESTON TO PLYMOUTH. The Company's engineers, Messrs. Hopkins and Sons, have received directions forthwith to make a preliminary survey thereof, for the purpose of forming a distinct Company, under the auspices of the present Directors; and as soon as the report is received the result will be publicly announced. Many and great advantages are expected to be derived to both concerns from this addition to the original line, as a complete and expeditious communication will then be effected between the Bristol and English Channels. Applicants of known responsibility, to whom the Directors have been unable to allot shares in the original undertaking, in consequence of the unprecedented demand, will have the preference to strangers in the allotment of shares for the extended line, on signifying their wish to that effect.

Applications for Shares may be made, post paid, to Charles Gurney, Esq., solicitor, and John Furman, Esq., Launceston; or to Henry Tomkins, Esq., solicitor, 6, Furnival's Inn, London; and to George Rose, No. 3, Copthall-buildings.

April 12, 1836.

HARWICH RAILWAY.

Capital £250,000, in 11,000 Shares of £20 each. Deposit £1 per Share.

PROVISIONAL COMMITTEE.

Louis Desanges, Esq.	Edmund Jerningham, Esq.
Nathaniel Garland, Esq.	H. W. Mertens, Esq.
William Gunston, Esq.	William Adams Smith, Esq.

Kenneth F. H. Mackenzie, Esq.
With power to add to their number.

BANKERS—Messrs. John Wright and Co., Henrietta-street.
SOLICITORS—Messrs. Taylor, Turner, Sharpe, and Field, 41, Bedford-row; and Messrs. Winter, Williams, and Fossick, 16, Bedford-row.

ENGINEER—William Hosking, Esq., F.S.A.
SECRETARY—Mr. John Thompson.
Temporary Office, 26, Austin-friars.

The port of Harwich is the only port between the North Foreland and Hull which is accessible in all states of the tide; and it is the constant resort in bad weather of the Scotch, North of England, Dutch and Hamburg, steam and other vessels. It affords the most direct means of communication between London, Antwerp, and Rotterdam; and through them with Germany and the Rhine, with Hamburg, and through Hamburg with Prussia, and by means of the Altona and Lubeck Railway generally with all the rest of the north of Europe.

A railway communication between Harwich and London will effect a saving in time between London and Rotterdam, or Hamburg, of twelve hours at least for mails and for passengers, and diminish the risk and consequent expense of merchandise as well as of passengers, by avoiding the shoals and sands in the estuary of the Thames. This communication will be carried by the Eastern Counties Railway from London to within sixteen miles of Harwich; and it is proposed to complete it by forming a railway from Harwich to fall into the Eastern Counties Railway at about two miles north-east of Colchester. A large agricultural district will be thus materially benefited; and the whole of the traffic of Belgium and Holland, and the north of Europe, with London and all England south of the Humber, and much of that from the eastern parts of Scotland, will be drawn through Harwich over the projected railway.

The line of country to be traversed by the railway is highly favourable for the purpose; and there are no parks or other ornamental or peculiarly valuable property which can be affected by it: and moreover, the project has the support of a landowner through whose property the line will run for several miles.

The Mayor, Aldermen, and Town Council of Harwich, and all the principal inhabitants of the town, have already pledged themselves in favour of the measure.

Applications for Shares may be made to the Secretary, at the office, or to the Solicitors.

Prospectuses will be issued in a few days.

LONDON AND BIRMINGHAM CANAL.—

CAPITAL—THREE MILLIONS.

In Shares of £100 each—Deposit £2.

PROVISIONAL COMMITTEE:
CHAIRMAN—Francis Downing, Esq.

Badger, Thomas, Esq. Dudley.	Moilliet, John Lewis, Esq. Birmingham.
Bagnall, John, Esq. Westbromwich.	Mason, James, Esq. Birmingham.
Barker, John, Esq. Wolverhampton.	Molineux, C. Henry, Esq. Dudley.
Bradley, Richard, Esq. Tipton.	Potter, P. Esq. Gorway-house, Walsall.
Bullock, Edwin, Esq. Westbromwich.	Robins, William, Esq. Stourbridge.
Cotterill, Thomas, Esq. Birmingham.	Ryland, Samuel, Esq. Warwick.
Chance, Robert Lucas, Esq. Smethwick.	Richards, Theophilus, Esq. Birmingham.
Chance, William, Esq. Birmingham.	Round, John, Esq. Sedgley.
Dixon, Edward, Esq. Dudley.	Scott, Robert, Esq. Stourbridge.
Foster, James, Esq. Stourbridge.	Shore, Joseph, Esq. Birmingham.
Finch, Francis, Esq. Great Barr.	Sparrow, W. H., Esq. Wolverhampton.
Gresley, Richard, Esq. Mereden.	Scholefield, J., Esq. M.P. Birmingham.
Groot, Joseph, Esq. London.	Smith, Richard, Esq. London.
Hawkes, Thomas, Esq. M.P. Himley.	Williams, Walter, Esq. Handsworth.
Haines, Richard, Esq. Westbromwich.	Williams, Philip, Esq. Tipton.
Hunt, Thomas Yate, Esq. Brades.	Webb, John, Esq. Burton-upon-Trent.

With power to add to their number.

SOLICITORS—Messrs. Ingleby and Wragge, Birmingham; Messrs. Baxendale, Tatham, Upton, and Johnson, 7, Great Winchester-street, London; Messrs. Wilson, Bell, and Steward, 35, Lincoln's-inn-fields, London.

CONSULTING ENGINEER—James Walker, Esq. F.R.S. L. and E., London.

RESIDENT ENGINEERS—James Green, Esq. Exeter; John Thomas, Esq. London.
SURVEYOR—Mr. Dugdale Houghton, Birmingham.

BANKERS—Messrs. Taylors and Lloyds, Messrs. Moilliet and Son, Birmingham; the Birmingham Banking Company; Messrs. Dixon, Dalton, and Co., Dudley; Messrs. Hankey and Co., 7, Fenchurch-street, London; Messrs. Vere, Sapte, Banbury, Muspratt, and Co., 77, Lombard-street, London.

CONDITIONS:

1. The Act of Parliament will provide that no person shall be responsible beyond the amount of his Shares.
2. Deposit of £2 per share to be paid, and no further call will be made till the Act be obtained.
3. The Deposit shall be available to the necessary expenses of the undertaking.
4. Interest at the rate of 5½ per cent. will be allowed on the calls, until the completion of the Canal.
5. Calls will be made after the Act is obtained, by Quarterly payments of £6 5s. per Share.

PROSPECTUS

Of a line of Navigation from Birmingham to London, commencing at the Stratford-on-Avon Canal in Warwickshire, and ending at the Regent's Canal, London; to be called THE LONDON AND BIRMINGHAM CANAL NAVIGATION. The great and leading objects of the proposed undertaking are—

First.—To effect the cheapest and most direct practicable line of water communication between London and Birmingham, and the great mining districts of Staffordshire, Worcestershire, and Shropshire.

Second.—To obtain, by the communication it will open with the Regent, Stratford, Worcester, Birmingham, Birmingham and Liverpool, Ellesmere and Chester, Trent and Mersey, and Bridgewater Canals, the quickest, cheapest, and most convenient line of canal conveyance, between London, Birmingham, Liverpool, and Manchester; also by a junction with the Oxford Canal at Banbury, an improved communication to the city of Oxford.

Third.—To give the facilities and advantages of water conveyance to the valuable and extensive districts through which the proposed line of Navigation is intended to be taken; districts capable of great and rapid improvement, and to which nothing can so materially contribute as a cheap and direct communication with the Metropolis, and the great manufacturing towns of Warwickshire and Staffordshire.

It must be evident that the proposed undertaking embraces objects of the highest national importance, and cannot fail to produce great and almost incalculable advantages to the Agricultural, Commercial, and Manufacturing interests of the kingdom.

The extraordinary facility that this line would give to London and Liverpool, to the manufacturers of Manchester, Birmingham, Wolverhampton, Dudley, Stourbridge, and Walsall, and to the Proprietors of Mines and Works in the counties of Stanford, Worcester, and Salop, must be obvious to the most superficial observer. Birmingham and Wolverhampton, and the contiguous mineral districts, would then be situated about midway, on the great thoroughfare water communication between London and Liverpool, and London and Manchester; and as vessels would be passing incessantly in each direction, the increased facility and dispatch could not but be productive of the highest advantages. The saving in distance by the proposed route will be thirty-six miles, and the locks will be reduced from one hundred and seventy-two to forty-eight.

One great feature of the proposed undertaking, is the opening of a cheap communication between the Metropolis and the great coal-fields of Staffordshire and Worcestershire. In the attainment of this object, every inhabitant of London ought to feel himself interested; experience every day furnishing additional proofs, that nothing but effective competition from the interior of the kingdom can insure to the householders of London a regular and steady supply of coal at moderate prices. Perhaps it is scarcely possible for the most sanguine mind to form an adequate conception of the benefits that would result from enabling the midland coal proprietor to compete with the northern proprietor, in supplying London with coal;—monopoly would be rendered impossible, combination frustrated, and free and active competition completely secured. By the proposed route, Staffordshire coal can be delivered in the City Basin at prices varying with quality, from 15s. to 20s. per ton.

With a view to render this concern as extensively useful as possible, the rates of tonnage will be low, and thus command that great mass of business which invariably follows moderate charges.

Manure and road materials will be permitted to pass at low rates. Wharfs will be provided where the canal will intersect main thoroughfares, and every encouragement be afforded to the free development of the energies of the districts through which the canal will pass.

The proposed navigation will possess all the improvements of the best modern canals. Where tunnelling is necessary, two tunnels, with a towing path under each, will be made; the sides of the canal will be walled; and the greatest of all modern improvements, the double towing path, will be carried throughout the whole line.

Confident in the superior cheapness and convenience of water conveyance (particularly as regards raw materials and heavy commodities), the promoters of this undertaking have no hesitation in submitting their plan to the public, in the face of the numerous railways now in course of formation; every day, in their judgment, furnishing further and satisfactory proof, that, though railway conveyance may be preferred for passengers and light goods, that require dispatch, and will bear high rates of transit, the great bulk of the trade of the country will still be carried on through the medium of cheap navigable communications.

The calculations as to the revenue being founded on indisputable data, the promoters of the measure have no hesitation in stating, that the prospect of remuneration is in the highest degree encouraging; and that, if due consideration be given to the merits of the proposed line, to the great extent and simplicity of its levels, to the superiority it will possess in respect to distance and lockage, to the well-ascertained fact that a full supply of water can be provided, the conclusion will be fully warranted, that in a short time after its completion, this really grand internal communication will yield such a return, as will entitle it to be classed amongst the most productive and successful undertakings of the kind in the kingdom. According to a moderate estimate, full ten per cent. will be realised. By the proposed route, goods will be delivered in London in thirty-two hours, instead of seventy, by the existing route. The saving in freight 20s. per ton.

Applications for Shares to be made to the Solicitors, and to Mr. GEORGE PALMER, 2, North Piazza, Royal Exchange, London, according to the form underneath; and no Shares will be secured until the deposit is paid.

LONDON AND BIRMINGHAM CANAL.

Gentlemen,—I request that you will reserve and secure to me —— shares in this Company; and, in consideration thereof, I agree to take the said shares, and to pay the deposit of £2 as mentioned in the Prospectus.

THE GLOUCESTER AND HEREFORD RAILWAY,

through Newent, Dymock, and Ledbury, with a Branch to Ross to connect Monmouth, Kington, Leominster, Newtown, Montgomery, Aberystwith, and the whole of the Midland Counties of Wales, with Gloucester, Cheltenham, and London.

To be incorporated by Act of Parliament.

Capital £500,000, in Shares of £50 each—Deposit £2 per Share.

DIRECTORS.

Hans Busk, Esq.	Lieutenant-Colonel Morrison.
Richard Cooke, Esq.	The Hon. F. W. Mullins, M.P.
Henry Charles Dakeyne, Esq.	Henry Patrick, Esq.
James C. Disney, Esq.	Frederick Polhill, Esq., M.P.
G. B. Lonsdale, Esq.	Thomas Dickenson Rotch, Esq.
A. W. Beetham, Esq., F.R.S.	John Henry Walker, Esq.
Major Macnamara, M.P.	Joseph Hume Wetherhead, Esq.

BANKERS—Messrs. Stone, Martin, and Stone, 68, Lombard-street; Messrs. Cox, Biddulph, and Biddulph, 43, Charing-cross.

SOLICITORS—Francis Beetham, Esq., 8, Chatham-place, New Bridge-street; John Gilbert Lander, Esq., 8, Gray's Inn-square.

ENGINEER and SURVEYOR—J. Braithwaite, Esq., and William Laxton, Esq.

SECRETARY—George Brown, Esq.

The Country Committee is forming, and will be announced, with plans showing the line of Railway, in forthcoming prospectuses.

In a commercial point of view this Railway will be most important, as it will offer such facilities for the conveyance of goods to and from the producing county of Hereford, and the manufacturing and populous districts of Staffordshire and Warwickshire on one side, and the clothing districts of Gloucester as well as London, and the eastern counties, on the other.

The city of Hereford and neighbouring towns, which have so long laboured under the disadvantages of a tedious, uncertain, and expensive conveyance, will, by this Railway, have opened to them a market in the rapidly improving port of Gloucester, and the trade with Bristol will be greatly and beneficially increased; goods which are now shipped from thence by water to Chepstow, from which place they are forwarded by river craft or land to Hereford and Ross, will, by this Company, be conveyed at little more than half the present charge, with this advantage, deliveries will be made in one-third the time now taken in the transit.

The counties of Radnor, Cardigan, and Montgomeryshire, will all be greatly benefitted by this Railway, as nearly the whole of the colonial produce consumed in those counties is brought overland from London, Liverpool, and Bristol, at a charge double that proposed by this undertaking.

The farmer will have a good and cheap communication with all the manufacturing districts of England; his produce will be within twelve hours reach of London; fat beasts now reaching Smithfield in a lame and impoverished state, losing from 8 to 12 per cent. in weight, will be brought to market in a good and wholesome condition. To the traveller the advantage of locomotive power is acknowledged; the formation of such a communication with Herefordshire will be the means of inducing many thousands who have not enjoyed the beauties of scenery in the neighbourhood of Ross and Windcliffe to resort to that great attraction so wonderfully blended by nature.

This Railway will be the first portion of a line of railway through Wales to Aberystwith, the nearest road from London to Ireland.

The Directors claim the right of not disposing of more than 4-5ths of the number of shares for the present, and of reserving the remaining 5th to be disposed of by them hereafter as to their discretion may seem fit; they also purpose making a sufficient reserve for the landed proprietors and others immediately interested in the undertaking.

It is calculated that the estimate of income will exceed 20 per cent. per annum, if the passengers increase in the same proportion as stated by Dr. Lardner,* the dividend will be nearer 30 per cent.

* Dr. Lardner states that "a probable estimate of the number of passengers to be expected on a projected line of railway may be made by increasing the average number of passengers for the last three years by the common railroad, in a twofold proportion.

"The average number of passengers daily between Liverpool and Manchester before the formation of the railway was about 450, the present average is about 1,300; the increase has been nearly the same at Kingstown to Dublin."

Applications for Shares to be made by letter, post paid, to Francis Beetham, Esq., at his office, 8, Chatham-place, New Bridge-street; or to John Gilbert Lander, Esq., 8, Gray's Inn-square, solicitors.

From the great number of Shares already applied for, applications will not be received after Saturday the 16th inst.

THE GLOUCESTER and HEREFORD RAILWAY,

in continuation of the Gloucester, Cheltenham, and London Railways.

Capital £500,000, in shares of £50 each. Deposit £2.

A prospectus, with the Directors' names, will be ready in a few days.

Applications for Shares to be made by letter, post paid, to Francis Beetham, Esq. 8, Chatham-place, New Bridge-street, and John Gilbert Lander, Esq., 8, Gray's-inn-square, solicitors.

GEORGE BROWN, Secretary.

THE BRITISH CHANNEL HARBOURS RAILWAY,

uniting the PORTS of the BRITISH CHANNEL on the entire SEA COAST of SUSSEX and KENT with the METROPOLIS and the PORT of LONDON, forming the most direct communication with the Channel Ports and Harbours of the Continent, and an immediate and comprehensive line of transits to the great Railways throughout England.

Capital £2,000,000, in Shares of £50.—Deposit £2 per Share.

SOLICITORS—Francis Beetham, Esq., and George Francis Cooke, Esq.

ENGINEER and SURVEYOR—Charles John Blunt, Esq.

The Board of Directors, already formed, will be announced in the forthcoming Advertisements and Prospectuses, upon the completion of their numbers.

ROUTE OF THE RAILWAY.

This Railway will commence at Portsmouth, and proceed as directly as the features of the country will admit, through the following important towns and places:—Portsmouth, Havant, Chichester, Arundel, Worthing, Shoreham, Brighton, Newhaven, Seaford, Hailsham, Hastings, Winchelsea, Rye, Romney, Hythe, Temerden, Folkstone, Dover, Eleham, Deal, Sandwich, and Ramsgate, with a branch from Hastings to Tunbridge.

This Company is formed for the purpose of affording to the inhabitants and merchants, traders, and others of the populous districts of the eastern quarter of the counties of Kent and Sussex, a direct, speedy, and economical means of conveyance and communication with each other, and with the metropolis, through the medium of the projected South Eastern, Brighton, and Hastings Railways, with the view of affording all that important line of the Channel coast between Portsmouth and Ramsgate, its ports and harbours, the whole of East Kent and of the Sussex coast, a participation in the advantages to be derived from the great Metropolitan lines, exclusively directed to the four great and distinct points of Dover and Brighton, Hastings, and Portsmouth.

The engineer has, during a considerable period, been occupied on the surveys and estimates, and shows the line of the proposed Railway to be most favourable as regards the practical facilities of construction.

Applications for Shares to be made by letter, post paid, to the solicitors, Francis Beetham, Esq., 8, Chatham-place, New Bridge-street, Blackfriars; or George Francis Cooke, Esq., 3, Raymond-buildings, Gray's Inn.

THE CITY RAILWAY, to unite the Birmingham, Great Western, Southampton,

proposed Brighton, Dover, and the South-Western Railways, with the City of London and the River Thames, with a Branch to Richmond.

To be incorporated by Act of Parliament.

Capital £1,000,000, in shares of £50 each. Deposit £2 per share.

DIRECTORS.

Albert W. Beetham, Esq., F.R.S., F.L.S.	The Hon. Warwick Lake
Hans Busk, Esq.	Admiral Maitland
Richard Cooke, Esq.	Major Macnamara, M.P.
Henry Charles Dakeyne, Esq.	The Hon. F. W. Mullins, M.P.
James C. Disney, Esq.	Frederick Polhill, Esq. M.P.
Thomas Smith Goode, Esq.	John St. Leger, Esq.
Robert Hay Graham, M.D.	Sir William Rawlins
Augustus William Hillary, Esq.	John Henry Walker, Esq.

BANKERS—Messrs. Whitmore, Wells, and Whitmore, and Messrs. Ransom and Co.

SOLICITOR—Francis Beetham, Esq.

ENGINEERS AND SURVEYORS—Charles John Blunt, Esq., William Laxton, Esq.

SECRETARY—J. Binns, Esq.

Offices of the Company, 9, Mansion House-street.

THE CITY RAILWAY, to unite the BIRMINGHAM, GREAT WESTERN, SOUTHAMPTON, PROPOSED BRIGHTON, and SOUTH-EASTERN RAILWAYS with the CITY OF LONDON, and the RIVER THAMES, with a BRANCH TO RICHMOND.

—Notice is hereby given, that application is intended to be made to Parliament, in the next Session, for leave to bring in a Bill for this undertaking; for making, constructing, and maintaining a Railway or Railways, Tram-road or Tram-roads, for the passage of coaches, chaises, waggons, carts, and steam or other carriages, and with proper warehouses, wharfs, landing places, arches and archways, viaducts, and suitable and commodious erections, works, roads, communications, and conveniences attached thereto, or connected therewith; which said Railway or Railways, Tram-road or Tram-roads, is or are intended to commence on the south side of the river Thames, at or near Bankside, adjoining the Southwark bridge, in the parish of St. Saviour's, in the borough of Southwark, in the county of Surrey, and will proceed, bearing south-west, through the several parishes, townships, hamlets, boundaries, or villages, of Christ Church, Lambeth, Battersea, Wandsworth, Putney, Barnes, East Sheen, Mortlake, and Richmond; all of which are situate and being in the said county of Surrey; and which said Railway or Railways, Tram-road or Tram-roads, as to the Surrey side of the river Thames, will terminate in or near Richmond, in the said county of Surrey; and also for a Branch Railway or Railways, Tram-road or Tram-roads, to communicate with the north side of the said river Thames, commencing at or near Battersea, in the said county of Surrey, and thence to proceed, crossing the river Thames, by a Viaduct, connecting the south and north sides of the said river Thames, in the parish of Fulham, in the county of Middlesex; and proceeding through the said parish of Fulham, and also through the said parishes of Kensington and Hammersmith, and to terminate at the junction of the Birmingham and Great Western Railways, in the parish of Hammersmith, at or near Harlesden green; all which said last-mentioned parishes are respectively situated and being in the county of Middlesex.

FRANCIS BEETHAM, 8, Chatham-place, Blackfriars,
Solicitor for the Bill.

THE THAMES TUNNEL,

opposite the end of Old Gravel-lane, Wapping, but on the Surrey side of the River, near Rotherhithe Church.

THE WORKS ARE NOW IN PROGRESS.

NOTICE IS HEREBY GIVEN, that the Public may view the Tunnel every day (Sundays excepted) from Nine in the morning until Nine at night, upon payment of One Shilling for each person. The Archway is brilliantly lighted with gas, and the Eastern Arch is now open to the inspection of visitors, in addition to the Western one. The work, which extends upwards of 600 feet under the bed of the River, is perfectly dry, and the descent by a safe and easy staircase.

By Order,
J. CHABLIER, Clerk of the Company.

N. B.—There are conveyances to and from the Tunnel, by an Omnibus, every half-hour from Grasechurch-street, and three times daily from Charing Cross, and the Green Man and Still, Oxford-street; also by the Greenwich and Westwich Steam Boats, from Hungerford Market, Queenhithe, and Fresh Wharf, at 9, 11, 2, and 4 o'clock.

Walbrook-buildings, Walbrook, April 16, 1838.

DENBIGHSHIRE IRON AND COAL COMPANY.

Capital £100,000, in 4000 shares of £25 each. Deposit £1 per share.

DIRECTORS.

Sir Patrick Bellew, Bart. M.P.	Leonard Koecker, Esq.
Thomas Barnewall, Esq.	George Smith, Esq.
John Smith, Esq.	Richard M. Bellew, Esq. M.P.

With power to add to their number.

BANKERS—Messrs. Wright and Co., 5, Henrietta-street, Covent-garden.

SOLICITOR—Robert Aloysius Worman, Esq.

The object of this Company will be to establish extensive Iron and Coal Works in Denbighshire, and for that purpose it is intended to purchase a very valuable freehold estate there, within a few miles of the port of Chester, which the owner has agreed to sell to the Company at an extremely moderate price.

Various pits have been already sunk upon the estate, and an eminent mineral surveyor has duly surveyed both the Coal and Ironstone which it contains, and more rich and more abundant cannot be found together in any other part of the kingdom. Moreover the quality of both is so fine as to be scarcely equalled, and the quantity so great as to be fairly termed inexhaustible. There are six seams of Coal and six veins of Ironstone, and the estimated minimum produce per acre, after leaving sufficient for pillars, is on an average as follows: Coals, 34,200 tons—Ironstone, 17,000 tons. It will, therefore, be easy to make weekly 320 tons of Pig Iron for the Liverpool and Lancaster markets, where it will always meet with a ready sale; and also to raise weekly 250 tons of extra Coal, to be sold at the pits for the neighbouring consumption, which will always demand weekly that quantity. To effectuate this, the capital will be thus distributed:—

Purchase money for the estate	£21,000	0	0
Act of Parliament to incorporate the Company, and the expenses connected with its formation	2,000	0	0
Furnaces, engines, and other expenses incidental thereto	34,000	0	0
Total dead capital	57,000	0	0
Ditto floating capital	43,000	0	0
	£100,000	0	0

ESTIMATED YEARLY OUT-GOING EXPENSES.

Making 16,640 tons of Pig Iron, being after the rate of 320 tons weekly, at £3 per ton	£49,920	0	0
Raising 13,000 tons of extra coal for sale at the pits, being after the rate of 250 tons weekly, at 2s. 8d. per ton	1,733	0	0
Salaries, taxes, and other incidental expenses	2,300	0	0
Interest on £57,000 dead capital	2,850	0	0
Total annual expenditure	£56,803	0	0

ESTIMATED YEARLY INCOME.

16,640 tons of Pig Iron, at £5 per ton	£83,200	0	0
13,000 tons of extra Coal, at 6s. 8d. per ton	4,333	0	0
Surface rental	125	0	0
Total yearly income	£87,658	0	0
Ditto expenditure	56,803	0	0
Yearly profit	£30,855	0	0

Thus, it will appear that a profit of about thirty per cent. will be readily realized, but should iron continue its present advanced price, which the numerous railroads already in progress, or in contemplation, both at home and abroad, render not merely probable, but all but certain, the profits will then be greatly increased, so that this Company offers to the public a fairer, safer, and more lucrative investment of capital, than any of the Companies of the day.

No applications for shares will be received after the 15th of April inst.

Applications for shares (if by letter, post paid) to be made at the Company's offices, 17, Ironmonger-lane, where the Prospectus may be had; the Prospectus may also be had at the office of Mr. Worman, Solicitor, Claremont-square.

TO THE SHAREHOLDERS OF THE LONDON AND GRAVESEND AND LONDON and DOVER RAILWAY COMPANIES.

The Directors of the London and Gravesend Railway Company, and of the London and Dover Railway Company, being aware how fully Government is impressed with the great national importance of a rapid communication between London and the coast, have caused different surveys to be made, in order to ascertain the best possible line for a Railway between those places, regard being had to population, revenue, and public benefit.

Being satisfied that it will be for the advantage of the proprietors of both these Companies that their interests should be consolidated in the intended application for an Act in the next Session of Parliament, and anxious to continue to enjoy that confidence which has hitherto been reposed in them, the Directors have been in negotiation with the promoters of the new Company, and have (subject to the approbation of the shareholders) made the following arrangement:—

That the holders of certificates, either in the London and Gravesend Company or the London and Dover Company, on which a deposit of £1 per share has been paid, shall have the option of receiving scrip certificates for £2 each, in exchange for two shares in either of the said Companies, in the proposed new Company; and also that such of them as may wish to obtain a further interest in the new Company shall be allowed a preference in proportion to the number of certificates which they may exchange, on making application to that effect at the office of the Company, No. 76, Cornhill, on or before the 1st day of May.

Any proprietor who may prefer to have the deposit already made returned to him may receive the same, after deducting a proportion of the expenses which have been incurred, so soon as the accounts can be made up and settled, of which notice will be given at the earliest opportunity, provided they express their intention in writing, to the Secretaries, No. 76, Cornhill, on or before the 22nd April inst.

By order of the Boards,
WILLIAM GREEN,
COLIN SMITH, } Secretaries.

LONDON, SALISBURY, EXETER, PLYMOUTH, AND FALMOUTH RAILWAY COMPANY.

Capital £2,500,000, in shares of £25 each. Deposit £1 per share.

PROVISIONAL COMMITTEE OF MANAGEMENT.

John Allen, Esq.	Rowand Ronald, Esq.
Col. William Bailey.	Joseph Barnes Sanders, Esq.
William Borradaile, Esq.	Henry Short, Esq.
John Brothers, Esq.	Sir John Slade, Bart.
W. W. Burdon, Esq. M.P.	Joseph Sparkes, Esq.
William Cash, Esq.	Henry Collins Splatt, Esq.
Robert Downie, Esq. of Appin	Henry Sparkes, Esq.
Wm. Campbell Gillan, Esq.	John Rodway Stock, Esq.
A. I. H. Grubbe, M.A.	Thomas Bruce Swinhoe, Esq.
George Hogarth, Esq.	Right Hon. Sir Edward Thornton, G.C.B.
Edward Hughes, Esq.	Colonel John Charles Tufnell.
George Money, Esq.	John Twells, Esq.
H. Norman, Esq.	George Walter, Esq.
Robert Page, Esq.	James C. Wilcocks, jun., Esq.
Thomas Phillpotts, Esq.	John Yates, Esq.
William Pinney, Esq., M.P.	

With liberty to add to their number.

STANDING COUNSEL—Sir William Webb Follett, M.P.; F. W. Slade, Esq.; P. Twells, Esq., and Richard Preston, Esq.

SOLICITORS—Messrs. Birkett and Son, and George Stephenson, Esq.

PARLIAMENTARY AGENTS—Messrs. Bulmer and Gillan, and Sir Robert Sidney.

ENGINEER—George Landmann, Esq.

SUPERINTENDENT—John Herapath, Esq.

SURVEYOR—Mr. Charles Dean, Exeter.

COMMITTEE AT EXETER.

Christopher Arden, Esq.	Charles Hubbard, Esq.
Daniel Bishop Davie, Esq.	Warwick Hele Tonkin, Esq.
Joseph Barnes Sanders, Esq. Ald.	John Tucker, Esq. Alderman
Joseph Sparkes, Esq.	John Madgwick Wilcocks, Esq.
Henry Sparkes, Esq.	James C. Wilcocks, jun. Esq.
John Ham, Esq. Alderman	

SOLICITOR—W. W. Furlong, Esq.

SECRETARY—Burford Furlong, Esq.

Applications for shares in the capital stock of the Company are received by Messrs. Spooner, Attwoods, and Co., and Messrs. Bouverie, Norman, and Murdoch, Bankers, London; by Messrs. Birkett and Son, Cloak-lane, Cheapside, and Mr. George Stephen, 20, Basinghall-street, the Solicitors of the Company; by Messrs. Bulmer and Gillan, 44, Parliament-street, and by Sir Robert Sydney, 11, Palace-yard, Westminster, Parliamentary Agents to the Company, and at the temporary offices of the Company, 12, Pancras-lane, Cheapside, London; by Messrs. Sparkes and Co., Bankers, Exeter; W. H. Furlong, Esq., Solicitor, Exeter; H. B. Furlong, Esq., the Secretary to the Exeter Committee, at the office of the Company, 1, Castle-street, Exeter; Messrs. Brodie and Co., Bankers; by the Wilts and Dorset Banking Company; by William Housman, Esq., Solicitor, the Close, by John Penistone, Esq., the Close, and by Messrs. Hettley, Everitt and Co., Bankers, Salisbury; William Stone, Esq., Bradford; Thomas Herbert Griffith, Esq., Warminster; by Messrs. Brodie, King, and Co., Shaftesbury; and by the respective branches of the Wilts and Dorset Banking Company at Blandford, Dorchester, Warminster, Poole, Wimborne, Frome, Bradford, Chippenham, and Devizes; by the Devon and Cornwall Banking Company, and by the respective branches of that establishment at Ashburton, Bodmin, Dartmouth, Devonport, Kingsbridge, Liskeard, Newton Abbott, St. Austell, and Totness; by Messrs. Willyams and Co., the Miners' Bank, by Messrs. Tweedy, Williams, and Co., Bankers, by Messrs. Mager, Turner, and Co., and by Henry Barrow, Esq., Truro; by Messrs. Tufnell, Falkner, and Co., and by Robert Cook, Esq., Solicitor, Bath; by the Northern and Central Bank of Manchester and Liverpool; by Messrs. G. Atkinson and Townly, Share-brokers, Liverpool; Mr. David Holt, Share-broker, Manchester; by Messrs. Ridsdale, Share-brokers, Leeds; by Mr. John Field, Share-broker, Sheffield; by Mr. J. S. Pidgeon, Share-broker, 2, Duke-street, Reading; by Mr. Christopher Roberts, Share-broker, Birmingham; by Mr. James Thomas, Albion Chambers, Bristol; by Mr. Edmonds, Share-broker, Bristol; by Mr. H. N. Payne, Share-broker, Wolverhampton; by Messrs. Gurney, Lethbridge, and Cawlard, Solicitors, Launceston; by William Bird, Esq., Solicitor, Okehampton; by Messrs. Gill, Rundle, and Co. Bankers, and by Messrs. Willesford and Son, Solicitors, Tavistock; Messrs. Simmons, Passingham, and Simmons, Solicitors, Truro; by Christopher Wallis, Esq., Solicitor, Bodmin; and by Messrs. Seymour and Raggett, Bankers, Basingstoke and Odiham, Hants; by Messrs. Heath and Co., Bankers, Andover; by Thomas Lamb, Esq., Solicitor, Andover, and by Mr. Menify, Share-broker, Andover.

The promoters of, and the Provisional Committee of Management for, this undertaking, have abstained from publishing the measure, or seeking the public approbation and support of the lines of Railway proposed to be constructed, until the result of a survey, and an examination of the several routes intended to be taken, had been brought under consideration, and had undergone the investigation which can alone secure public support and the sanction of the Legislature.

The line from Exeter to Falmouth, by way of Crediton, Okehampton, Launceston, Bodmin, Truro, and Redruth, where it will unite the existing Portreath Railway on the north coast, and Devoran on the south, the proposed Victoria and Padstow Railways at Launceston, and the existing Wadebridge Railway at Bodmin, with a branch from Okehampton to Tavistock, Plymouth and Devonport on the south, and to Bideford and Barnstaple on the north, are being surveyed, and will shortly be submitted to the public.

12, Pancras-lane, Cheapside, London. GEORGE PRICE, Secretary.

ACCIDENTS IN MINES.—DAVY-LAMP.

EXAMINATION OF MR. GEORGE UPTON.

(Continued from No. 32.)

The result of your experiment is such as to lead you to believe that too much is attributed to the ignorance and carelessness of the miner, and too little to the dangerous circumstances in which the lamp is placed?—I believe so.

Then you would draw a further inference, that some of the accidents that have occurred where the whole of parties engaged at the moment in the mine have been lost, ought to be accounted for from the contingencies to which you have alluded?—I do; and I will state the reason: it appears that carelessness, as far as the Davy-lamp is concerned, must be almost entirely confined to the taking off the cap, or, as it is called, the wire-gauze cage of the lamp, to get a better light. A gentleman who was examined before this Committee, I believe, stated, that on one occasion he had examined a lamp after the men had been burnt, and that he found there was some small derangement of the wire-gauze. The man, it appears, had, on the ignition of the gas, thrown the lamp away, which might have occasioned that derangement; but if the cap had been taken off, the lamp would have been found without it, and near the spot whence the explosion originated; because the expansion of the inflammable gas is not in its greatest force where it ignites.

But as you are not a practical miner, you have not taken sufficiently into consideration the circumstance of a miner deranging his lamp, under the impression that the mine is safe at that particular moment?—I can only consider it probable that he would derange it to get a better light. I cannot see any other motive, and no derangement but that of taking the cap off the lamp would give him a better light; therefore, till it be proved that some lamp is found with a cap off, I shall always doubt that the accident has been produced by such a circumstance; for I consider it not possible for a man, under such circumstances, to replace the cap.

Might not the lamp be disarranged without the cap being taken off, supposing the side of the gauze was injured?—It might, but very little; and I think that sometimes the using candles, and at other times lamps, in the same part of a mine, has an injurious effect upon the care of the workmen.

Do not you think that the lamp being placed by the viewer or the overman in the hands of a miner, is tantamount to saying the mine is not in a safe state, you must use particular care?—Yes; I have no doubt that it is so; but men will very often have to use a lamp instead of a candle. When the appearances are not sufficiently strong to indicate any sufficient reason for such a change, I have no doubt that they sometimes look upon it as a grievance, so far as their working is concerned, the candle giving the better light.

Have you had some conversations with miners upon this subject?—I have. I beg to observe, that the light of the Davy-lamp cannot be increased without destroying its safety, even as far as it now extends. It is known that the heat of the flame is according to its bulk; and the consequence would be, that if Sir H. Davy had increased the cylinder of his wire-gauze lamp to the extent necessary for a larger wick, the power of such a body of flame would be so great as to oxydize or to burn the gauze to pieces in a short time. This is stated particularly by Dr. Turner, in the "Elements of Chemistry."

Do you happen to know whether the men working in mines demand a higher price for working with lamps than with candles?—I have heard that they used to do so. Mr. Roberts stated, that he could do a great deal more work with a candle than with a lamp.

Will you describe what the general opinions of the men are as to the safety and the light of the lamp?—In Staffordshire there is one universal opinion as to its safety. I did not meet with a single instance of any person who had the least doubt of its safety; but the miners in Staffordshire, particularly in the very thick seams, do not work with it.

Had they been accustomed to use the lamp?—Seldom or ever to work by.

Have you ever in any place had a conversation with the men as to the light given by the Davy-lamp?—Yes: they stated that it was quite inadequate for the purpose for which they wanted it in the thick mines, to give them such a light as they could work by.

Have you ever conversed with the men in the north of England, where it is used, as to the light given by the lamp compared with candles?—No, I have not: in the thin seams much more light would be got from it than in the thick ones.

Are the men ever in the habit of using more than one lamp where it is required; two or three lamps together?—I saw one lamp, not a Davy-lamp, one of Mr. Stephenson's lamps, but it had not been used much.

Was that on the principle of combination of the Davy-lamps?—Much such a lamp as the Committee have amongst Mr. Stephenson's on the table. The men were very anxious to get a better light than the Davy-lamp gave them. They were very anxious to work with lamps on account of the known or supposed safety of them over candles, but they found it impossible, as I have before stated, to work with the light of the Davy-lamp in the thick mines.

Will you state whether you have taken into consideration the subject of general ventilation, independently of the use of lamps?—I have.

Have you any thing to state to the Committee upon that subject?—Only as connected with lamps: I have always considered that ventilation is in its nature specific; that is, adapted to the supposed quantity of gas produced in a regular way in the mines, and that it cannot be enlarged to such an extent as to meet sudden occurrences, such as the bursting of blowers, or the interruption of the ventilation of the mine, from falls and various matters that cannot always be guarded against: I therefore connect the subject with lamps in this way, that a real safety-lamp prevents any of such casual interruptions being of the serious consequence which they would be with a candle or an unsafe lamp. Supposing the case of an interruption of ventilation in any part of the mine, persons going into that part with a perfect lamp, that is, with a lamp that would not allow flame to pass, the circumstance of inflammable air being there, even to a great extent, would be known without its discovery being attended with more inconvenience than perhaps a disagreeable effect upon their breathing; but in the other case, the smallest interruption to the ventilation of the mine must, when a naked light or an imperfect lamp is used, be attended with bad consequences, and at times with those of a most destructive nature.

Does any part of your lamp come under the operation of the existing patents?—The cone or cap is belonging to a patent that is now in force to a lamp.

It forms a constituent part of the specification?—It does.

How long has that patent to run?—Seven years.

Have you made many lamps on the construction which you have submitted to the Committee?—Some few; but we have not yet attempted to sell any.

Will you describe the result of some experiments made by Dr. Turner and other gentlemen; had either of the gentlemen tried the effect of the explosive mixture in your lamp?—Yes.

Have they given an opinion upon it?—Yes, Dr. Turner has, and that opinion I can read.

Do you quote a private letter?—No; from a public book, his "Elements of Chemistry." He says, in his fifth edition, "These principles suggest the conditions under which Davy's lamp would cease to be safe. If a lamp, with its gauze red-hot, be exposed to a current of explosive mixture, the flame may possibly pass so rapidly as not to be cooled below the point of ignition; and in that case an accident might occur with a lamp which would be quite safe in a calm atmosphere. It has been lately shown by Messrs. Upton and Roberts, lamp manufacturers of this city, that flame may in this way be made to pass through the safety-lamp, as commonly constructed; and I am satisfied, from having witnessed some of these experiments, that the observation is correct. This, then, may account for accidents in coal mines where the safety-lamp is constantly employed. An obvious mode of avoiding such an evil is to diminish the apertures of the gauze; but this remedy is nearly impracticable, from the obstacle which very fine gauze causes to the diffusion of light: a better method is to surround the common safety-lamp with a glass cylinder, allowing air to enter solely at the bottom of the lamp, through wire-gauze of extreme fineness, placed horizontally, and to escape at the top by a similar contrivance. Upton and Roberts have constructed a lamp of this kind, through which I have in vain tried to cause the communication of flame, and which appears to me perfectly secure. In case an accident should break the glass, their lamp would be reduced to a safety-lamp of the common construction."

Have any other scientific gentlemen given an opinion similar to that?—Mr. Pereira has.

Can you quote his own words?—Yes: "The lamp Messrs. Upton and Roberts have invented appears a much more perfect instrument than the Davy-lamp; for in all the experiments hitherto made with it, the flame has not passed through the wire-gauze;" although the same means as are detailed above were resorted to, in order to induce it to do so.

Have you offered to any gentlemen in the North, where these Davy-lamps are used, to try your lamps?—No, we have not; and for this reason, that we have considered that the first trial of a lamp in a mine could never be carried to the point to which it ought, without so much danger that no person would be present at the time, if he could help it; because, if the lamp were put to the proper test, and did not bear it, an explosion to a very considerable extent might take place; and if it were not put to that test, it would be no trial of its powers. It is well known that artificial gases can be made of much greater explosive power than carburetted hydrogen, and I consider the lamp ought to be able to bear more than it could at any time, or under any circumstances, meet in a coal mine; its safety ought not to be limited to a doubtful point.

Might not your lamp be put in some situation in a mine, where it would produce a partial explosion without producing a serious explosion?—No: if it produced an explosion in any case, it must be expected to produce it in all similar cases.

Would that not be a trial of the lamp?—It might be so tried; there could be no objection to such a trial, after it had been tried elsewhere.

You are quite aware, that in some of the galleries the air is foul on account of the ventilation of the mine not being communicated to that particular section?—Yes.

And therefore an experiment might be made by placing the lamp in that section of the mine?—Yes: of course there could be no objection to that, or any thing that might lead to a good effect.

But if it were tried in one place, and did not explode, it might be tried in other places?—There could be no possible objection to any trial which it might be put, but I cannot see the utility of one of this nature.

But you are aware that by such means hundreds of pitmen, unacquainted with the safety of these lamps, might be convinced of the utility of your invention?—Yes: but I think if they saw the lamp, and were told it was safer than the Davy-lamp, and gave a better light, which they would at once see, they would have no hesitation in using it.

Would not the experiment, in some portion of the mine, where an explosion would be of no consequence except lighting the gas at that portion of the mine, convince the masters and the men too?—Yes, no doubt: but I think if the Committee were to have experiments made on the lamps by scientific men, and publish the results of those experiments, such a mode of proceeding would at once remove all doubt on the subject. I think this would be the shortest way, and so far desirable, as every moment's delay may be attended with danger.

Supposing the Committee should fix a day for the purpose of testing various lamps which have been brought before them, you are prepared to wait upon the Committee and assist in experimenting?—At any time.

The Committee observe you have placed two lamps upon the table; is the one which you have not described essentially different from the one you have described?—Both are on the same principle. The large one has been brought to show the capability of the principle being adapted to a larger scale of action: the principle is not circumscribed by a particular sized wick or production of light, as Sir Humphrey Davy's lamp is.

Then you apprehend that your lamp recommends itself to the owners of mines on the ground of safety and humanity, and that it recommends itself to the miner as affording a better light than one simply on the principle stated by Sir Humphrey Davy?—I do; and I think that the giving a better light will be a great inducement to the miner to fall readily into the use of a new lamp.

Supposing that a second glass were introduced where the gauze is, would not the effect be the same?—Yes; if the gauze could be dispensed with, there would be better light.

The principle of your light may be preserved as well with that alteration?—Yes: it does not want any gauze, other than to guard against external injuries.

Therefore an improvement upon your lamp would be to have a glass instead of gauze?—Yes, as to light, but not safety: a gauze is placed to meet any unexpected accident, because if the glass were to be broken, and the gauze not to be there, explosions might ensue, as with the Davy-lamp.

An accident that might destroy the two glasses would not effectually destroy the gauze?—We have a lamp with two glasses, but we feel a little circumscribed in one respect. It is necessary to avoid, if possible, much complication; safety-lamps have to go into rough hands, and if they are very delicate or complicated, their parts would be likely to be injured or misplaced, and get out of order, to an extent that might render them at times ineffective.

The price of your lamp, independent of the patent right, would not be very much greater than the price of Sir Humphrey Davy's lamp, would it?—We should be inclined to sell them at the price that lamps were generally sold at; getting a moderate profit. Though we should like to be repaid for a considerable outlay, yet, rather than any impediment should be placed in the way of removing the cause of those accidents, we should be very moderate in our price.

CHEMISTRY.

(Continued from No. 32.)

MANGANESE.

The substance known in commerce (continues Dr. Fyfe) by the name of *manganese*, is a compound of the metal of that name and oxygen. We are little acquainted with the metal itself, but the oxide alluded to is a valuable compound. When exposed to a red heat it gives off oxygen, and hence the method of procuring that gas on a large scale, merely by heating it in an iron retort, which is connected by tubes with a gasometer. The action with acids is also important. When heated with oil of vitriol it yields oxygen, and hence the method usually practised on a small scale. With muriatic acid it affords chlorine gas, which is disengaged from the acid, by the oxygen evolved from the oxide depriving it of its hydrogen. Hence the process for procuring this gas. When, however, it is prepared on a large scale, instead of muriatic acid, sea-salt and oil of vitriol are used, by which the previous preparation of the muriatic acid is avoided.

When the oxide is fused with nitre, a substance called *mineral chamelion* is formed; so termed from the change of colour it undergoes when dissolved in water; the solution being at first green, but afterwards becoming red. In this case the manganese acquires oxygen from the nitre, and becomes an acid, which acquires an additional quantity of oxygen from the air, when it is dissolved in water.

Black oxide of manganese is used in decolorising glass, as formerly explained; also, when used in larger quantity, for giving a purple colour to glass. It is used also in the preparation of the chloride of lime, or bleaching compound.

The metals next described belong to the class commonly called *noble metals*, not only from their value, but also from their power of resisting the action of heat and air; they are gold, silver, and platinum. Gold resists the action of acids; the fluid that acts most equally is aqua-regia, owing to the chlorine it contains, and by which a brown solution of muriate of gold is formed. This solution is valuable from the ease with which it is decomposed by other substances, and by which useful compounds are procured. When mixed with solution of muriate of tin, it yields the purple powder of cassius, used for giving to glass a rich red colour. Gold is easily alloyed with other metals, some of which, as lead, impair its ductility and malleability; others, as copper, add to its hardness. By order of Government, gold is alloyed with copper when used for coins, sterling gold containing one-twelfth part of copper.

Silver also resists the action of heat and air, but is more easily attacked than gold by acids. With nitric acid it forms a colourless solution, the nitrate, which, when evaporated to dryness and fused, yields lunar caustic. The salts of silver are, when exposed to light, liable to become black; and hence the use of the solution of the nitrate in the manufacture of indelible ink, which is merely a solution of the nitrate with mucilage and a little China ink. Some of the metals, as copper, decompose the nitrate; and hence the method of throwing down silver from it; and as silver is soluble in nitric acid, and gold is not, they can be easily separated when alloyed, and obtained in their metallic state.

Platinum resembles gold in its resisting the action of heat and air, and also of acids; it is dissolved, however, by the nitro-muriatic, affording a brown solution, from which ammonia and its salts precipitate a yellow powder, which, when exposed to a red heat, yields platinum in its metallic state; hence the method of preparing *spongy* platinum.

The metals described have the property of forming fulminating compounds, the most important of which is that with silver; it is procured by dissolving lunar caustic in water, and adding alcohol, by which the fulminating compound is precipitated.

Dr. F. next described generally the different methods of procuring gold, silver, and platinum; after which he made a few remarks on the metals bismuth and cobalt; the former valuable from the ease with which it is fused, and hence used, when alloyed with others, in the making of solder and fusible metal; the latter from its yielding, when dissolved by muriatic acid, a sympathetic ink, which, when much diluted, gives traces on paper that are colourless, but becomes blue by being heated.

CHROMIUM.

The only other metal described was chromium, which, though itself not valuable, yet is, when in the state of a salt, a very useful substance. It exists in the chrome-ore discovered by Hibbert in Shetland. When the ore is fused with nitre, and the solution obtained is acidulated with sulphuric acid, it yields the salt called chromate of potass, which is valuable, from the different coloured compounds it affords by the addition of metallic solutions; and hence its use in calico-printing.

Having finished the account of inorganic bodies, Dr. F. next proceeded to the chemistry of organic bodies, commencing with those of the vegetable kingdom.

Vegetable substances in many respects resemble each other in their general properties. With few exceptions their component parts are oxygen, hydrogen, and carbon. Some contain nitrogen, and all have a minute quantity of saline and earthy matter. They are all decomposed by heat; when excluded from air the products are water and hydro-carbon; but when heated in air they yield water and carbonic acid. Those that contain nitrogen also afford ammonia when decomposed by heat. With acids they are decomposed, the action varying according to the nature of the acid. Vegetables undergo spontaneous changes, called *fermentations*, of which there are three kinds: the *vinous*, the *acetous*, and *putrefactive*; the first so called because vinous or spirituous fluids are produced; the second, because acetum or vinegar is the product; and the last, because the substance runs into putrefaction. Fermented fluids are divided into two classes: the *vinous*, obtained from the juice of plants, and *malt liquors*, got from the infusion of seeds. Dr. F. next described generally the process of brewing, by which ale and porter are procured, and shewed the method of finding when the fermented fluid is of the requisite strength. All fermented fluids yield by distillation spirit of wine or alcohol; and hence the process of procuring whisky, merely by subjecting to distillation any fluid previously made to undergo the vinous fermentation, the distillation being repeated again and again according to the required strength. From spirituous fluids alcohol, in a state of purity, is procured by distilling it repeatedly from substances that have a powerful attraction for water; as lime, muriate of lime, or potassa. Another process consists in putting common alcohol into a bladder, and keeping it for some time at the temperature of about eighty, by which the water exudes through the pores; a third method consists in keeping it under the exhausted receiver of an air pump along with lime, by which the watery vapour given off is absorbed by the lime, leaving the alcoholic vapour to exert a pressure on the alcohol, and prevents its farther evaporation, while the water in it is constantly flying off in vapour, and is condensed by the lime. By these processes alcohol free from water is obtained of sp. gr. 796. In this state it is very volatile and inflammable; during its combustion yielding carbonic acid and water. It is decomposed by acids; with sulphuric acid, when in large quantity, it yields olefiant gas; and hence the method of preparing it.—*Edinb. Chron.*

IMPROVEMENT OF THE STEAM-ENGINE.

We extract the following observations from the last number of the *Glasgow Liberator*:—

So many intimations of important improvements in this machine have, since the days of Bolton and Watt, been given to the public through the medium of the newspaper press, and yet comparatively so little improvement really effected, that persons who have turned their attention to the subject are now generally inclined to treat such notices with very little attention. Although of that class who are doubtful of the possibility of making any great improvement in the construction of the steam-engine—as at present made by intelligent engineers—we are, nevertheless, of opinion, that an attempt at that desirable object, which was made a few weeks since in this city, is entitled to the serious consideration of all who feel interested in the progress of this important machine.

The object of the attempted improvement referred to is to dispense with the *air pump*, and all the large and expensive valves connected with it: a small pump being used to pump air only, while the discharge of the injection water and condensed steam is attained by another simple and ingenious contrivance. The manner in which the discharge of the water from the condenser was effected will be easily understood by a reference to the principles of pneumatics. The condenser was placed at a considerable height above the cylinder, and had a simple pipe communicating with its lowest part, and continued downwards about thirty feet, where it terminated a few inches under the surface of water. By means of this pipe the condenser was kept constantly clear of water. The only means employed to extract the air and uncondensed vapour was by attaching a very small pump to the condenser. The pump employed for this purpose was merely the one end of the *hot water pump*. The hot water pump will probably be about a six-hundredth part of the capacity of the cylinder, while the *air pump* is generally made two-thirds of the diameter of the cylinder, and half the stroke or about a fourth of the capacity.

With this substitute for the air pump the engine wrought for several weeks, and maintained a vacuum of 11 lbs. to the square inch. The engine on which this experiment was tried is eight horse power, and is the property of Mr. Edgar. The person to whom the contrivance and prosecution of this scheme is due is Mr. M'Pherson, manager of Mr. Edgar's chemical works. The plan is not altogether new, but we believe never has been attended with such success as in the present case, and only considered applicable where a fall of thirty feet below the engine was to be had. Mr. M'Pherson was for several sessions a zealous member of the mechanics' class, and is pushing himself forward in the world entirely by his own merits. He seems to have thoroughly considered the action of the steam-engine, and has had the advantage of consulting several experienced practical engineers who felt interested in his scheme. There are some persons, however, who have given Mr. M'Pherson very little encouragement to proceed in his undertaking. Among those is an *elder* (no *saint* by-the-bye), who decides all such questions with very little consideration. We believe he has not attempted to *prove* the necessity of the large *air* pump; but this *dignitary* deals more in denunciation than in demonstration; and probably more respect should be due to his opinion of the engine-house than of the engine.

We believe the quantity of air contained in river water is about one-fortieth of its bulk. Supposing that, in the case of the engine referred to, the quantity of water admitted into the condenser to be 3½ gallons per minute to each horse power; and supposing the hot water pump of capacity to throw sixteen cubic feet per hour—on this supposition the quantity of air disengaged from the injection water would be only about a seventieth of its bulk, the pressure in the condenser being about four lbs. It is probable, however, the hot water pump is larger than we have allowed. It will be objected to Mr. M'Pherson's plan, that though there are many engines working below 11 lbs. vacuum, yet it is not by any means reckoned sufficient for a good engine; but when it is considered that the engine on which the experiment was made was an old one, and all the apparatus merely of a temporary kind, and yet that the vacuum was sometimes so high as 11½ lbs.—after these considerations, there is good grounds for expecting that the plan will succeed still better under other arrangements. It would be advisable to use a much larger pump than that employed by Mr. M'Pherson. It is evident that the dimensions of the pump, to produce any greater degree of rarefaction, must be increased, at least as the squares of the times that the air is to be rarefied, so that Mr. M'Pherson would require to employ a pump sixteen times larger than that previously employed, in order to rarefy the air in the condenser four times, that is, to reduce it from four to one pound of pressure; but even that would be very small compared to the air pump at present in use.

With these remarks we take leave of this subject for the present, hoping that if engineers do not show cause for making large air pumps, some intelligent purchaser will look over the expense of brass valves, boring air pumps, &c., and gain sufficient courage to try an engine on the improved plan.

CORNWALL LENT ASSIZES.

MATTHEWS AND ANOTHER v. TRESTRAIL.

Mr. Serjeant Bompas, with whom was Mr. Dampier and Mr. Butt, conducted the plaintiffs' case; and Mr. Erle, with whom was Mr. Crowder and Mr. Peacock, the defendant's. Mr. Gillson, of Truro, was the attorney for the plaintiffs, and Messrs. James and Hodge, of the same place, for the defendant. The plaintiffs' case was taken up by their attorney from purely charitable motives.

This was an action brought by two poor men, who are miners, to recover 39*l.* 13*s.*, which was due to them for copper ore raised from Hallenbeagle mine, in this county. The case was considered by miners as of great importance, and occupied the Court upwards of thirteen hours. It appeared that the plaintiffs were tributers, and took a certain limit or pitch in the mine to work for two months at 11*s.* in the pound. Plaintiffs worked a considerable time, and at last broke into a good bunch of ore, and raised a quantity of very rich copper ore, value about 12*l.* or 14*l.* per ton. On the 13th of August, 1835, Captain Hambley (the principal agent on the mine) went down into the level where plaintiffs were working, and accused them of taking ore from without the limits of their pitch, and forcibly turned the plaintiffs out of the mine; alleging that they had, in consequence, forfeited their ore to the use of the adventurers, together with their tribute money. The plaintiffs established their case by proving that the ore which they were accused of stealing was actually broken by them in their pitch, in the presence of several men who worked in the same level with them; and also by proving, that in the course of mining, lodes are found varying in colour, size, and quality, showing that it was not unlikely for the plaintiffs to raise this ore out of their pitch, although it was of a different colour. "The fact is," said Mr. Serjeant Bompas, in addressing the jury, in reply, "that the pitch turned out to be a very profitable one, and much more so than Captain Hambley had anticipated when he sett it, and he being afraid that he should be charged by the defendant (who is the purser of the mine) with neglect or ignorance of his duty, watched for an opportunity to accuse the plaintiffs of fraud, and to expel them from the mine."

For the defence, Thomas Kent proved that he saw one stone of ore about the size of his fist on plaintiffs' pile, which he accused them of taking from the adventurers' pile, which they (plaintiffs) denied; but after witness had repeatedly urged them on the point, they confessed that they had taken it from that pile.—John Seymour, another witness, proved that he saw plaintiffs with a wheelbarrow full driving it from the direction of the adventurers' pile towards their own pile. There were a great number of witnesses adduced on the part of the defendant, but those two only could prove any thing that might inculpate the plaintiffs. It appeared that the last of these witnesses' evidence on this point was only made known to the defendants' counsel the night before he was examined on the trial, and he came the next morning and swore he saw the plaintiffs with a wheelbarrow full. This man's evidence exhibited so many and such glaring discrepancies that the gentlemen of the jury would not give it credit; and after the Judge had summed up and commented fully on the evidence on each side, the jury, on a few minutes' consultation, returned a verdict for the plaintiffs, with 45*l.* damages. The announcement of the decision of the jury diffused the most lively satisfaction throughout the Court.

TIN.—We are informed that a very rich course of tin has been lately cut under the old men's works, in an ancient mine named Larkholes, in the parish of St. Cleer; which, from the present promising appearances, it is expected will produce tin in abundance, when the water engine and stamps, which are now in progress, are set to work.—*Falmouth Packet.*

PROCEEDINGS OF SCIENTIFIC MEETINGS.

GEOLOGICAL SOCIETY OF LONDON.

The annual general meeting was held on the 19th February last, when the report of the council was read, from which it appeared that a gradual increase in the number of its members had taken place. Forty-five new Fellows having been elected, and the deaths and resignations being sixteen. Upon the whole, the society, which, at the end of 1834, consisted of 745 members, at the end of 1835, had increased to 774.

The expenditure in the past year had been under the estimates submitted to the society.

Out of the proceeds of the Wollaston Fund at the society's disposal, the council had thought fit this year to present a medal to M. Agassiz, to mark their high sense of the value of his work of last year upon fossil fish; and to award to M. Deshayes the sum of 25*l.* as some assistance to him in his labours on fossil conchology.

The report of the committee appointed to examine into the state of the Library and Museums was then read.

The following is the address to the Geological Society, delivered at the anniversary, by CHARLES LYELL, Jun., Esq., president:—

GENTLEMEN.—You have learnt this morning, from the annual report of the council, that the financial affairs of the society continue to flourish; and that since our last anniversary we have published the concluding part of the third volume of our Transactions, and the first part of a fourth volume. Another part of the same volume is nearly ready, and the council have directed their thoughts seriously to the means of preventing, in future, the accumulation of such heavy arrears of unpublished memoirs. The delays have hitherto arisen from a desire to print all papers containing original and valuable matter in the order in which they were presented; but many have been sent to us in so unfinished a state as to retard the printing of the rest, and, as the science advances rapidly, and new facts pour in daily, the authors even of the most finished memoirs soon require to make additions and corrections, and thus the evil is continually augmenting. The council have therefore resolved, for the future, to print at once those memoirs which are in the most complete state, without waiting for others which are imperfect.

During the last year there have been elected into the society forty-five new members, and we have lost four by resignations and twelve by deaths. Among the names of the deceased Fellows, I may mention those of Mr. Goodhall and Mr. Mammatt, as having zealously contributed to the progress of our science. Mr. Goodhall was an active collector of British fossils, and to his labours we owe many valuable contributions to our museum, and the discovery of shells of new species, figured in Sowerby's Mineral Conchology. The work of Mr. Mammatt, on the Coal-field of Ashby-de-la-Zouch, has been honourably mentioned by my predecessor, Mr. Greenough, in his last anniversary speech. Mr. Mammatt had superintended, for more than thirty years, the working of extensive coal-mines, and kept a record of the details of various sections with which he was practically acquainted. To these documents he has added several plans of remarkable faults which intersect the carboniferous strata of Leicestershire. He has shown that on one side of one of these faults the beds rise to the height of 500 feet above the corresponding beds on the other side, yet the mass of uplifted strata does not project above the general level of the country. He infers, therefore, that it has been removed by denudation, and that the wreck of it alone now remains on the surface in the shape of sand and boulders. Mr. Conybeare has drawn similar conclusions respecting analogous phenomena observed on a still greater scale on the Newcastle coal district.* Whether the denudation was sudden or gradual, or whether the faults were produced at once, or were the result of a series of movements, are points which the limits of this discourse will not allow me to discuss at present. Mr. Mammatt contends that these enormous shifts were not effected by volcanic convulsions, but simply by a quiet and uniform operation accompanying the desiccation, shrinking, and induration of dense masses of argillaceous and other rocks; an opinion which, however ingenious, seems irreconcileable with the evidence of violent disruption with which this and other coal fields abound. Mr. Mammatt's volume is illustrated by more than one hundred plates of fossil plants, but it is much to be regretted that, before executing such costly illustrations, the author did not obtain the assistance of a skilful botanist, who might have selected the most important, and might have added descriptions, without which mere figures can scarcely ever convey accurate information.

Early in the spring of last year, an application was made by the Master General and Board of Ordnance to Dr. Buckland and Mr. Sedgwick, as Professors of Geology in the Universities of Oxford and Cambridge, and to myself, as president of this society, to offer our opinion as to the expediency of combining a geological examination of the English counties with the geographical survey now in progress. In compliance with this requisition we drew up a joint report, in which we endeavoured to state fully our opinion as to the great advantages which must accrue from such an undertaking; not only as calculated to promote geological science, which would alone be a sufficient object, but also as a work of great practical utility, bearing on agriculture, mining, road-making, the formation of canals and railroads, and other branches of national industry. The enlightened views of the Board of Ordnance were warmly seconded by the present Chancellor of the Exchequer, and a grant was obtained from the Treasury, to defray the additional expenses which will be incurred in colouring geologically the Ordnance county maps. This arrangement may justly be regarded as an economical one, as those surveyors who have cultivated geology can, with small increase of labour, when exploring the minute topography of the ground, trace out the boundaries of the principal mineral groups. This end, however, could only be fully accomplished by securing the co-operation of an experienced and able geologist, who might organize and direct the operations; and I congratulate the society, that our foreign secretary, Mr. de la Beche, has been chosen to discharge an office for which he is so eminently qualified.

At the same time that measures are thus in train for completing a geological map of England on a magnificent scale, the map of Scotland, by Dr. MacCulloch, which has been so long and impatiently expected, is at length on the eve of publication. But at the moment when I can announce this welcome intelligence, we have to deplore the sudden loss of this distinguished philosopher. The first paper in the first volume of our Transactions was from the pen of Dr. MacCulloch, and subsequent volumes contain no less than eighteen of his memoirs. It would lead me far beyond my present limits were I to attempt to give a general analysis of these, and of his numerous other works on geology, such as his Western Islands, and his classification of Rocks. The influence exerted by them on the progress of our science has been powerful and lasting, yet they have been less generally admired and studied than they deserve. Their popularity has been impaired by a want of condensation and clearness in the style, a defect which no one could more easily have remedied than the author, had he been willing to submit to the necessary labour. Another blemish has also contributed to give a repulsive character to some of his later productions, especially his System of Geology, the absence, or apparent absence, of all enthusiasm and love for his subject, and a disposition to neglect or speak slightingly of the labours of others, and even to treat in a tone bordering on ridicule some entire departments of science connected with geology, such as the study of fossil conchology. I attribute these imperfections principally to habitual ill health, acting upon a sensitive mind; for certainly, Dr. MacCulloch's spirits were much depressed by bodily sufferings when I had first the pleasure of knowing him, about the year 1825. His imagination was then haunted with the idea that his services in the cause of geology were undervalued, and it was in vain to combat this erroneous impression. After that period he almost entirely withdrew himself, even when residing in London, from all personal intercourse with the most active geologists; and to those who knew him this seclusion from scientific society was a subject of frequent regret. Having expressed myself thus unreservedly on some of the peculiarities and defects of his style, I may affirm, that as an original observer, Dr. MacCulloch yields to no other geologist of our times, and he is perhaps unrivalled in the wide range of subjects on which he displays great talent and profound knowledge. For myself, I may acknowledge with gratitude, that I have received more instruction from his labours in geology, than from those of any living writer.

One of the most important communications which we have received for many years, is an essay by Professor Sedgwick, on the changes of structure produced in stratified rocks after their deposition. Respecting the magnesian limestone, he has confirmed by new arguments the conclusions which he formerly drew, in proof that the complicated concretions of this rock have been produced since the original deposition of the beds. But the principal part of his memoir is devoted to the description of the cleavage or slaty structure of rocks, and those partings which have been called joints. The author first shows the analogy of the Cumbrian zone of green slate and porphyry with the structure of the principal chain of North Wales. In these regions, as in part of the slaty series of Westmoreland and Lancashire, occur many beds exhibiting a slaty cleavage, which the Professor distinguishes from a jointed structure. Joints, he says, are fissures placed at definite distances from each other, the masses of intervening rock having no tendency to cleave in a direction parallel to such fissures: whereas in the planes of cleavage, the rock is capable of indefinite subdivision in a direction parallel to such planes. The planes of stratification, on the other hand, are perfectly distinct from both, and throughout the district alluded to have never been found to coincide with the lines of cleavage, dipping sometimes to the same point, and sometimes to opposite points of the compass, but being always inclined to them at an angle of from 10° to 30° or 40°, and in no instance at 90°. There are regions in North and South Wales thirty miles in extent, and many miles in breadth, where the cleavage planes preserve an undeviating dip and direction, notwithstanding that they traverse strata which are greatly contorted.

* Report on Geology to the British Association, 1832.

In that variety of slate-rock which is used for roofing, all traces of original deposition or stratification are often obliterated; yet in many quarries a number of parallel stripes is discovered, sometimes of a lighter and sometimes of a darker colour than the general mass. These stripes, says the Professor, are universally parallel to the true beds, whenever such beds can be discovered, whether by organic remains, by the alternations of similar deposits, or other ordinary means. Many of these beds are of a course mechanical structure, others are fine chloritic slate; but the coarser beds and the finer, the twisted and the straight, have all been subjected to one change, a crystalline cleavage passing alike through all. Some of the sections given, show the cleavage planes preserving an almost geometrical parallelism, while they pass through curved strata, of which the sedimentary origin is obvious. In another place, it is said, that where the slaty cleavage is very perfectly brought out, the rocks always make an approach to homogeneity; but where the coarse beds predominate, the slaty structure almost entirely disappears. Dr. Boase, in his comments on these passages, has remarked that they seem inconsistent with each other, and I confess that at first they struck me in the same light; but the Professor has explained to me, that although the coarse beds are not slaty, they have a grain parallel to the cleavage planes of the finer beds, this grain being exhibited when they are struck with the hammer; and it is only when the materials of the beds are very coarse, that the cleavage planes entirely vanish.

In regard to the origin of these phenomena, the author supposes that crystalline or polar forces must have acted on the whole mass, simultaneously in given directions, and that the action being carried on at once through a very large mass of matter, may have acquired an accumulated intensity of crystalline action in each part; so that the whole intensity of crystalline force, modifying the mass, may not have been equal to the sum of the forces necessary to crystallize each part independently, but may have been some function of that sum, whereby it may have been increased almost indefinitely.

I regret that I have not space to do justice to this ingenious speculation, nor have I yet had sufficient opportunities of observation, to know whether we shall be able to distinguish generally, with precision, those slates which are diagonal to the strata, from those flagstone-slates, as it is proposed to term them, which are parallel to the layers of deposition. During the last summer, I observed in the Swiss Alps, that the fissile roofing-slate, and drawing-slate of the Niesen, in the Canton of Berne, divides into extremely thin laminæ, which are *parallel* to the true planes of stratification. The direction of the beds is shown by alternations of coarse and clearly mechanical strata of a kind of greywacke, the whole series belonging to the green sand or fucoid grit formation. If it be said that these slates may owe their laminated texture to extremely minute flakes of talc, mica, or some other foliated mineral, which may have fallen as sediment, and have been all deposited on their flat surfaces, I reply, that in that case they would exemplify the exact similarity of certain acknowledged slates of deposition to others which have originated in crystalline forces independent of sedimentary action. Mr. Murchison, after confirming the truth of the Professor's observations as applied to all those regions of Wales which have come within his survey, has pointed out what might by some be considered an exception to the rule, in a part of the slate-rocks of Pembrokeshire, where the planes of slaty cleavage are coincident with the true laminæ, as proved by colour and the alternation of various layers of deposit. Mr. Murchison states, however, that although these rocks are quarried as roofing-slates, and are a part of the older system, they may be classed by Mr. Sedgwick as fine flagstones.

Some confusion will, I fear, arise from attempting to restrict the term slate to those cases alone where the cleavage is oblique to the stratification; but whatever nomenclature we adopt, it is clear from the excellent paper of the Professor, that three distinct forms of structure are exhibited in certain rocks throughout large districts: namely, first, stratification; secondly, joints; and thirdly, slaty cleavage; the last having no connexion with true bedding, and being superinduced by a cause absolutely independent of true gravitation. These different structures must have different names, even though there may be cases, and I believe there will be many, where it is impossible, after carefully studying the phenomena, to decide upon the class to which they belong.

One curious consequence, but slightly alluded to by the author, appears to follow from the facts described, namely, that the slaty structure must have commenced at a period posterior to the last series of violent movements which discolated the strata, and threw them into anticlinal and synclinal lines. Such disturbances would have deranged the parallelism of the cleavage planes. If, therefore, there are proofs, as I believe there are, of the elevation or subsidence of these rocks since they assumed the slaty structure, the whole country must have been moved bodily, or the separate masses, if they changed their relative position, must have moved in such directions as to allow the dip of the cleavage planes to remain unaltered.

(To be continued.)

INSTITUTION OF CIVIL ENGINEERS.

At the meeting of this Institution, on Tuesday the 28th of March, the President, JAMES WALKER, Esq., in the Chair, a model of an iron railway chair was first exhibited. It is of simple construction, being merely a resting point for the rail, supported by four legs, the feet of which are turned up at a considerable angle. Mr. Baker, the inventor, who was present, said, in answer to questions put by the president, "that the chair should be embedded in concrete; that the depth of the concrete must vary according to the nature of the ground through which the line of railway passes; that on the common London clay, two feet six inches, under the feet, would be sufficient; that the expense must depend upon the facility of procuring materials for making the concrete; that where gravel could be easily obtained, the chairs could be applied as economically as the blocks now in course of being laid down on the London and Birmingham line; that he proposed to keep the rails to their bearing, by wedges, the joints to be filled with tarred oakum, so as to allow expansion and contraction." In answer to an observation from Mr. Macneell, Mr. Baker said, "that the object in turning up the feet was to resist the lateral concussion, as the weight or pressure is not, altogether, vertical." Mr. Fordam highly approved of the invention; and said, "that on a railway with which he had been connected great inconvenience had been felt, and considerable loss sustained, from the want of some such contrivance."

Mr. Storey, engineer of the Stockton and Darlington Railway, in reply to a series of questions from the chairman, said, "that for railway blocks a perfectly hard or elastic substance was greatly to be preferred; that a soft or non-elastic stone block soon wears away, under the action of the rail; that the size of the block, at present used, is four cubic feet; the weight of the rail is forty-eight pounds per yard; that the weight of the rails originally laid down on the Stockton and Darlington line was twenty-eight pounds per yard; that the weight of the locomotive engines varies from five to eleven and a half tons, the diameter of the cylinders of the small engines is ten inches, of the large fourteen: the average speed of the trams carrying coals is eight miles per hour; that the maintaining of the railway in repair is contracted for, at from 74*l.* to 150*l.* per mile per annum, the company finding the materials; that 74*l.* is paid where the trains are drawn by horses; the carriages travel twelve miles, each way, six times a day; the engines are also kept in repair by contract; the company find the engines, the contractors pay interest on the first cost of the engines, and afterwards keep them in repair, at a price which varies from tenpence to sevenpence per mile; that for those travelling at twelve miles in the hour, tenpence is paid, and sevenpence for those at eight miles: the contractors find coal; very little coke is used; the coals cost 3*s.* 6*d.* per ton. The coaches cost from 80*l.* to 120*l.*: that 450,000 tons of coal, 12,000 tons of lead, and other loading, amounting in all to about 500,000 tons, were carried on the railway during the last year: that the inclination is generally with the load; the inclination near Stockton is at present 1 in 120, it was originally laid down at 1 in 104: friction is computed equal to 1 in 200. Does not consider the inclination near Stockton any advantage, as the sum of the friction on the loaded and empty carriages, going to and returning from the town, is greater than it would be if the line were perfectly level."

After Mr. Storey had given answers freely, and satisfactorily, to all questions respecting the Stockton and Darlington Railway, drawings were produced, by the president, of a patent stone-planing machine. It consists of a travelling frame, carrying a round steel-pointed instrument, and a broad chisel-shaped tool. On the motion of the frame, along the stone, the point makes the first incision, and the broad edge follows, performing a duty something like that of a smoothing plane; the other parts are more complicated, but were clearly illustrated by the drawings. Mr. Carnigy, the patentee, said, "that the machine is of Scotch invention; that five men had, in 200 days, dressed 160,000 feet of stone, reducing it, on an average, three inches; that the expense is about one halfpenny per foot; that the machine cannot be seen in London, but that some are ordered from Scotland for Plymouth; the whole weight of the machine is about six tons, and the price 150*l.*; that the travelling part weighs about two tons, but can be loaded up to eight. The stone hitherto dressed by the machine has been the Ardbroath flag, from Lord Morley's quarry. Steam power is employed. That the stone prepared by this machine can be delivered in London, fit for use, at less cost than the price of dressing it at the quarry by hand. The machine travels at the rate of about thirty feet per minute, but the speed varies according to the nature of the stone. It does not take off more than about two inches from the stone at every passage over it. The wear of steel is so trifling, that it does not form an item in the calculation of expense." A working model is on its way to London, which will probably be erected at the Adelaide Gallery.

These drawings having been fully examined and explained, a paper was read from Mr. Perkins, saying, "that a member of the Institution having stated that his (Mr. Perkins) engine was only a modification of Mr. Wolfe's engine, he begged to observe, that in Mr. Wolfe's engine the steam is always acting, on both sides of the smaller piston; whilst it acts, alternately, on the larger. That in Mr. Perkins' engine there is no reaction; but in Mr. Wolfe's, the steam acting in the larger cylinder is reacting on the smaller; that Mr. Perkins believes his engine to be entirely his own invention; that Mr. Hornblower was the first person who used the double cylinder; that Mr. Wolfe was the next. Mr. Wolfe used steam, at a higher pressure, and better boilers, than Mr. Hornblower; that Mr. Hornblower's engines were excellent in theory, but required too much and too constant attention from the stoker: that the tubes of the boiler were sometimes emptied, and were in consequence cracked by the action of the fire. That Mr. Wolfe's engines worked well, for they raised in Cornwall 57,000,000 pounds of water; whilst Bolton and Watt's engines only raised 36,000,000 pounds. But Mr. Perkins thinks there is no advantage gained in using two cylinders, so long as the pressure does not exceed 200 pounds per inch on the piston; and he himself prefers the single cylinder. Mr. Perkins thinks that the man who originates an idea, though he does not bring it to perfection, has more merit than he who afterwards takes up the same notion, and successfully adapts it to practice."

The business concluded with some remarks from Mr. Fordam, in allusion to a subject discussed on a previous evening. He said, "that steam, on being suddenly released from compression, and allowed to expand, loses part of its heat, as a wet sponge, on being pressed, emits part of the contained water; and steam does not immediately, though permitted to escape into a highly-heated chamber, recover its lost heat."

CANAL OF NICARAGUA.

The following project for carrying into execution the cutting of a canal across the isthmus of Nicaragua, in the republic of Central America, commonly called Guatemala, in order to unite the Pacific with the Atlantic Ocean, has been transmitted us:—

In the year 1825, a company was formed in London for the purpose above mentioned; and various parties were dispatched to Guatemala to make proposals to the government for carrying this important object into effect; whereupon the congress of Guatemala issued a decree, inviting the agents of such parties as were desirous of engaging in the undertaking to send in their proposals; and a contract was in consequence entered into in June, 1826, on behalf of the house of Palmer and Co. of New York, but which it appears was never ratified by the latter.

About the same period, the King of Holland deputed General Van Veer to Guatemala, in order to make the necessary surveys, and report upon the practicability of the undertaking: the General returned to Europe in 1828, having, it appears, entered into some conditional arrangement on the subject with the government of Guatemala. Subsequent political events, however, obliged the King of Holland to give up the project altogether.

Since then inquiries were directed to be made on the subject by his Majesty's Board of Control for India Affairs, the attention of the British government having been directed to the opening of a speedier communication with India.

In the event, however, of the undertaking being seriously contemplated, it would be desirable in the first instance that a general treaty of security and neutrality should be entered into by the principal commercial nations in Europe, guaranteeing a free passage through the canal, the protection of the works, and the regular payment of the tolls agreed to be levied; commissioners being appointed on their respective behalves, in order to ensure the due execution of such treaty; also that some power, ostensibly neutral, be appointed guardian of the works and their approaches, in the event of any maratime war breaking out.

No competent survey has as yet been drawn up respecting the nature and extent of the works required: the undertaking, however, according to general reports, appears to be perfectly practicable: the greatest difficulty would perhaps arise in being able to make a secure and satisfactory arrangement with the government of Guatemala, owing to the unsettled state of that country, and in securing a sufficient number of competent labourers, capable of standing the heat of the climate.

From the most correct information that has hitherto been published, it would appear that a line of canal, not exceeding 100 English miles, would have to be cut from the Atlantic side into the lake of Nicaragua, along the course of the river St. John, which is situated in about eleven degrees north latitude; some part of this river might however be rendered navigable, while there would be no impediment in the lake, where there is plenty of water for vessels of any burthen. The direct line across, from the lake Nicaragua to the port of St. John in the Pacific Ocean, nearly a sandy plain, would not probably require a length of canal of above twenty-five miles; as, according to a survey executed by order of the Spanish government, the whole distance is stated to be about 32,000 yards, barely twenty miles: the same survey reported the height of the waters of the lake to be about 134 feet above those of the Pacific; the difference between the level of the waters of the lake and those of the Atlantic Ocean is probably somewhat greater from the number of rapids and falls in the river St. John.

Supposing, however, that the entire length of the proposed canal were 150 miles, excavated fifteen feet deep by forty broad, and that it cost upon an average 10,000*l.* sterling per mile, including the labour, materials, locks, and towing-path, the undertaking might be completed for about 1,500,000*l.* sterling. With a sufficient number of competent labourers, the canal ought to be completed within five years from the period of their commencement: the locks, stone, bricks, iron, copper, and wood-work required for the works, being sent out ready prepared from Europe.

The tolls might be fixed at half a Spanish dollar per ton on all vessels, and one per cent. on the value of all merchandise passing either way; which it is estimated ought to produce the subscribers a fair interest for the capital advanced, after providing for the requisite expenses of repairs and maintenance, independent of the immense benefit the commercial community at large would experience from the opening of a variety of new markets for their produce and manufactures, by facilitating the intercourse with the western coasts of North and South America, the East Indies, China, New Holland, and the numerous islands in the Pacific Ocean.

The money might be raised by subscription amongst the leading merchants in the principal cities of Europe and America, upon certificates issued for the same, at the rate of $100 each; operations to be commenced so soon as a proper contract was entered into with the government of Guatemala, and that the subscriptions amounted to one-fifth of the sum required. The money to be deposited in the joint names of trustees, and the affairs entrusted to a committee of management, appointed for the purpose in London, who might correspond with the branches established in other places. It is suggested that in order to encourage subscriptions, that an interest of 2½ per cent. should be allowed by the governments of the respective countries where such subscriptions were raised, to be repaid from a fund to be reserved out of the tolls for that purpose.

The cost of sending out an expedition to Guatemala, composed of commissioners, to enter into a contract with the government, and persons competent to execute the requisite surveys, might amount to about 5,000*l.* sterling: and if the necessary permission and protection were obtained beforehand from the government of Guatemala, the surveys might be completed within six months after the arrival of the party at the river St. John.

IRON MINES OF BERYE, IN THE EAST INDIES.—The very low price of earth, and the great proportion of metal it contains, renders the value of iron extremely cheap, yet not so much so as from these circumstances might be expected; this is accounted for from the great scarcity of charcoal, without which nothing can be done; none can be procured nearer than twelve miles, and there it sells for half a rupee the bullock load. Sir Charles Malet visited several of the forges, the process was the same in all, and the same weight of metal was generally extracted from the same quantity of iron earth. He also procured a guide to attend him to the mines as soon as the moon arose. He set off about two o'clock, and leaving the Gwalier road on the left, traversed a cultivated plain for three miles, until he reached a village called Naigow, where he found a number of smiths working at this early hour. His guide expressing some doubts respecting the road to the mines, they readily supplied him with another, who leaving all regular paths, led him over a wild scene of hills and dales, until about five miles further; he reached the mines just as the day dawned, time enough to see several loads of iron-earth drawn up by torch-light. No language can convey an adequate idea of the scene. The darkness of the morning, the gloomy lights in the deep shafts of the mines, the black dirty miners, the shouts of the drivers and noise of the bullocks, with the savage aspect of the surrounding hills, altogether produced an extraordinary spectacle. So powerful was the effect of the iron in the environs of Berye, that the compass varied nearly three points.—*Forbes's Oriental Memoirs.*

THE COLLIER BOY.—In one of the Newcastle collieries thirty-five men and forty-one boys died by suffocation, or were starved to death. One of the boys was found dead with a Bible by his side, and a tin box such as colliers use; within the lid he had contrived to engrave with the point of a nail this last message to his parent and his brother,—"Fret not, my dear mother, for we are singing the praises of God while we have time. Mother, follow God more than I did. Joseph, think of God, and be kind to poor mother."—*Merthyr Guardian.*

FOSSIL TORTOISE.—A petrified tortoise has lately been found in the chalk rocks on the south side of the hill called the Montagne Noire, in the commune of Issel, near Castelnaudry, in the Nord. It is a foot and a half long, and four feet in circumference. The shell is in the most perfect preservation, and of a yellowish colour, and all its marks are distinctly visible. It weighs 170 pounds.

ORIGINAL CORRESPONDENCE.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—I beg to offer a few solutions to the questions inserted in your valuable *Journal* of the 26th March.

Question 1.—Suppose the greater wheel to be 60 feet diameter, 5 feet over the breast, with 180 buckets, each bucket to contain 16 gallons, the wheel to make 3 revolutions per minute, and to work with a 6 feet crank.

To find the horse power we have $\frac{180}{4} = 45 \times 160 = 7200 \times 120 = 864000 \times 3 = \frac{2592000}{33000} = 78{\cdot}53$ horses: to find the maximum load we have $6 \times 2 \times 3 = 36$, and $\frac{2592000}{36} = 72000$ lbs., the maximum load. Secondly, for the lesser wheel we have $\frac{90}{4} = 22{\cdot}5$, and $22{\cdot}5 \times 80 \times 60 \times 6 = \frac{648000}{33000} = 19{\cdot}63$ horses for the lesser wheel. To find the load we have $3 \times 2 \times 6 = 36$, and $\frac{648000}{36} = 18000$ lbs., the maximum load of the lesser wheel: therefore, the greater wheel is four times the power of the lesser. Thirdly, let x = the constant velocity of the water, and y = the difference betwixt the velocity of the water and that of the wheel; then y^2 = force of water, and $y^2 \times x - y = xy^2 - y^3 = 0$ a maximum, into fluxions, will be $2xy\dot{y} - 3y^2\dot{y} = 0$, and $2xy = 3y^2$ and $2x = 3y$, therefore the maximum momentum of the wheel will be, when the velocity of the water is to that of the wheel, as 3 is to 2. With regard to the centrifugal force. Let a = the velocity in feet per second, $y = 4{\cdot}01$, x = diameter, and C the centrifugal force, then the general expression will be $C = \frac{a^2}{x}$.

Question 2.—84 inches width of shaft, and 48 inches width of level, then $84 - 48 = 36$, and $\frac{36}{2} = 18$, and $84 - 18 = 66$, equal the base of the horizontal right-angled triangle; then, by the 47th, 1st Book Euclid, we have $\sqrt{84^2 - 66^2} = 106{\cdot}82$ the maximum hypothenuse, or the longest line that can be drawn from vertix to vertix, longitudinal through the timber; and the distance let fall from the vertix on the hypothenuse (which is the side of the square timber) is found by the above theorem to be $12{\cdot}0462$: hence $128{\cdot}815 - 12{\cdot}0462 = 116{\cdot}7680 = 9$ feet 8 7-10 in the length of the timber that can be introduced into the level.

Question 3.—The weight of lead ores in 1 fathom is 7824 lbs., or 3 tons 9 cwt. 3 qrs. 12 lbs.; and the tough lead is 5232.3 lbs., or 2 tons 6 cwt. 2 qrs. 24 lbs. Weight of silver 179 oz. 6 dwts. Weight of tough lead, after deducting the silver, is 2 tons 6 cwt. 2 qrs. 15 lbs.

Value of lead	£55	19	2½
Ditto silver	48	3	8¾
	104	2	11¼
Deduct returning charges	12	4	6
Net value per fathom	£91	18	5¼

Question 4.—The two traverses from the centre of the dragonal shaft to the vertical point, over the end or extremity of the level, will give easting 537 feet, and northing 98¾ feet. Hence we have the difference of latitude 98·75, and departure 537, given to find the course and distance; and as 537 : S. 90° :: 98·75 : tangent of course 10° 25′, therefore the bearing is 10° 25′ north of east; and 545·7 feet will be the length of the horizontal line from the centre of the diagonal shaft to the vertical point. Hence, to find the length of the surface line, we have a right-angled triangle, whose base is 545·7, and angle of elevation 13°; as S. 77° : 545·7 :: S. 13° : 126 feet the perpendicular; and as S. 77° : 545·7 :: 90° : 560·2 the length of surface line. The perpendicular of the inclined shaft is 96·41 feet, and that of the winze is 71·6 feet: therefore the distance on the surface is 93 fathom 2 feet 2 inches; the depth of the shaft is 49 fathoms, and the bearing is 10° 25′ north of east.

I am, Sir, your very obedient servant,

Redruth, April 6, 1836. —— Wm. Tonkin.

LAUNCESTON HARBOUR AND RAILWAY.

TO THE EDITOR OF THE MINING JOURNAL.

Mr. Editor,—Your correspondent, "One of the Engineers," is perfectly correct in stating that I am totally unacquainted with the district of Launceston. That I should have subjected myself to the ire of a gentleman professionally engaged in the execution of this undertaking, cannot be a matter of surprise. My suggestions—designated, rather uncourteously, I conceive, as "egregious misstatements"—were grounded on the company's own plan, submitted, with the prospectus, to the public; on a reference to which, persons who have never visited Launceston, and I presume many of the subscribers to this enterprise have not, have a right to conclude that the Tamar is navigable up to that town.

I agree with your correspondent that a ship canal would be attended with a very great expense; so also will the proposed harbour and railroad—much greater, probably, than the public have been led to expect. Moreover, I very much doubt their "sufficiency for all practical purposes," but am glad to perceive it is now intended to continue the railroad to Plymouth. This addition to the original plan did not surely emanate from the letter containing the "egregious misstatements" put forth by, Sir, your obedient servant,

April 12, 1836. —— A Constant Reader.

EAST CORNWALL MINING COMPANY.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—As an occasional correspondent, may I request the favour of the insertion of the enclosed in the columns of your forthcoming number.

I am, &c. J. Budge.

"TO THE DIRECTORS OF THE EAST CORNWALL MINING COMPANY.

"Gentlemen,—The following is the transcript of a letter I had written for the purpose of presenting to your deputation at Callington; but on reconsideration, it occurred to me, that as I was going immediately to town, it would be a more preferable course to send it direct to the Board of Management. I am, with all due respect, gentlemen, your very obedient servant, "John Budge."

"*London, April* 12, 1836."

"Gentlemen,—As the representatives, for the time being, of the whole body of directors of the East Cornwall Silver Mines, I beg leave to address you relative to the situation I have filled as surveyor, assayer, accountant, &c., at these mines, and in which it is your express desire that I should continue. I have availed myself of the opportunity afforded me for deliberation on this subject, and have come to the determination of withdrawing from your employ, and hereby respectfully tender my resignation.

"The courtesy I have received from you renders it imperative on me to give an explanation of the motives I am actuated by in adopting this line of conduct, and which I will endeavour to do candidly, clearly, and respectfully.

"In the first place, then, permit me to say, that the measures adopted for causing Mr. Malachy to quit the management of these mines, have been, in my opinion, most unjustifiable; and the uninterrupted means which I have necessarily had of knowing and judging of that gentleman's conduct in the superintendence, from the commencement of the undertaking to this hour, enables me to declare most positively and solemnly, that there does not exist the slightest ground for censure in any part of his conduct; but, on the contrary, he is justly entitled to the highest respect and approbation of every proprietor. If, then, gentlemen, you can be so regardless about the success of this stupendous undertaking as, without any real cause of complaint, to dismiss most abruptly and unwarrantably the only person in the kingdom who is fully qualified to conduct the operations, what guarantee, allow me to ask, can a humble individual like myself obtain that I shall not experience similar treatment at your hands?

"From the long and extensive practice I have had, and the laborious application I have used in every branch of silver mining in particular, (and especially as I have been an agent at the East Cornwall mines during the whole course of her working, as well under the original company as the present,) I am convinced, in my own judgment at least, that (with the exception of your late manager) there is not a man to be found so capable of conducting these mines as myself. This being my conviction, I cannot submit to come under the control of parties who, from want of experience, are totally unfit (and are themselves fully conscious of the fact), to superintend the working of this adventure, however great their attainments may be in tin, lead and copper mining: and I make this declaration without the most remote intention of contesting the abilities of the parties in question, for whom I entertain a high respect and sincere regard; but I beg to be allowed to state a fact, which you are in some measure aware of, that there is no similarity between a silver lode and any other; and a miner will require more years to obtain a knowledge of the indications, quality, peculiarities, and produce of a silver lode, (and judicious treatment of the multifarious ores,) than of all other mineral or metallic lodes that can be enumerated.

"I conclude therefore by expressing the strong and painful conviction now on my mind, that the ill-advised course you have taken will, in all probability, be the lamentable cause of the East Cornwall speculation becoming a total failure. I remain, with sincere desires for the prosperity of the mine, gentlemen, your obedient servant, "John Budge."

"*Callington, April* 8, 1836."

[We insert our correspondent's communication. We must say we think it hastily written and ill-judged, in which we know he will agree with us when he sees it in type. There is a degree of independence which all agents should maintain, but they may go a step too far—our friend will take this in its proper sense, and while we admit his ability, will pardon us for not going to the same extent as regards discretion.—Ed. M. J.]

GEOLOGY—THEORY OF THE CREATION.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—In former times the advocate of the enclosed theory of the creation of man would have been charged with deism. Geology, however, has of late made such rapid strides, that, in the present day, none but the most ignorant think of interpreting *literally* the writings of the inspired historian, as recorded in the first page of Holy Writ.

The accompanying remarks appear to me to be interesting, as conveying the opinion of the most eminent geologists of the age. Possibly you will think them deserving a place in your valuable Journal. D.

[We insert the letter of our correspondent and the observations referred to, without offering any opinion thereon.—Ed. M. J.]

Geology—Theory of the Creation.—The constitution of this world does not look like a system of optimism. It appears to be arranged in all its departments, on the principle of slow and progressive improvement. Physical nature itself has undergone many revolutions, and apparently has constantly advanced. Geology seems to shew a distinct preparation of it for successive orders of living beings, rising higher and higher in the scale of intelligence and organization, until man appeared. Astronomical deductions and actual measures by triangulation prove, that the globe is an oblate spheriod, flattened at the poles; and this form we know, by strict mathematical demonstrations, is precisely the one which a fluid body, revolving round its axis, and become solid at its surface by the slow dissipation of its heat, or other causes, would assume. The globe, in the first state in which the imagination can venture to consider it, appears to have been a fluid mass, with an immense atmosphere, revolving in space round the sun. By its cooling, a portion of its atmosphere was probably condensed into water, which occupied part of its surface. In this state, no forms of life, such as now belong to our system, could have inhabited it. The crystalline rocks, or, as they are called by geologists, primary rocks, which contain no vestiges of a former order of things, were the result of the first consolidation on its surface. Upon the further cooling, the water, which, more or less, had covered it, contracted; depositions took place; shell-fish and coral insects were created, and began their labours. Islands appeared in the midst of the ocean, raised from the deep by the productive energies of millions of zoophites. These islands became covered with vegetables fitted to bear a high temperature, such as palms, and various species of plants, such as now exist in the hottest parts of the world. The submarine rocks of these new formations of land became covered with aquatic vegetables, on which various species of shell-fish and common fishes found their nourishment. As the temperature of the globe became lower, species of the oviparous reptiles appear to have been created to inhabit it; and the turtle, crocodile, and various gigantic animals of the saurian (lizard) kind seem to have haunted the bays and waters of the primitive lands. But, in this state of things, there appears to have been no order of events similar to the present. Immense volcanic explosions seem to have taken place, accompanied by elevations and depressions of the surface of the globe, producing mountains, and causing new and extensive depositions from the primitive ocean. The remains of living beings, plants, fishes, birds, and oviparous reptiles are found in the strata of rocks, which are the monuments and evidence of these changes. When these revolutions became less frequent, and the globe became still more cooled, and inequalities of temperature were established by means of the mountain chains, more perfect animals became its inhabitants, such as the mammoth, megaloni, megatherium, and gigantic hyena, many of which have become extinct. Five successive races of animals appear to have been created and swept away by the physical revolutions of the globe, before the system of things became so permanent as to fit the world for man. In none of these formations, whether secondary, tertiary, or diluvial, have the fossil remains of man, or any of his works, been discovered. At last, man was created, and since that period there has been little alteration in the physical circumstances of the globe. In all these various formations, the ceprolites (or the dung of the saurian reptiles in the fossil state, exhibiting scales of fishes and other traces of the prey which they had devoured) form records of warfare waged by successive generations of inhabitants of our planet on one another; and the general law of nature, which bids all to eat and be eaten in their turn, is shown to have been co-extensive with animal existence upon our globe, the carnivora in each period of the world's history, fulfilling their destined office, to check excess in the progress of life, and maintain the balance of creation. The more we discover of creation, the more conspicuously does uniformity of design appear to pervade its every department. We perceive here the physical world gradually improved and prepared for man,

SPECULATION IN LIVERPOOL.

To shew to what an extent the mania for speculation has arrived at in Liverpool, we subjoin a list of the companies at present forming, with their nominal and subscribed capital, number of shares and deposits. What will be the upshot of the madness that seems to prevail through all classes for the formation of joint-stock companies of every description, time alone will show; but such is the infatuation with which schemes are embarked in, and the avidity with which shares are taken in any newly-announced concern, that where prospectuses have announced that only 6,000 or 10,000 shares would be issued, as many as 17,000 to 24,000 have been applied for; and so soon as the allotments are made, the favoured and fortunate individual holding the scrip can instantly dispose of his shares at a premium. Where 1s. deposit has been paid, the shares have sold for 20s. to 35s., and 1*l.* deposits for 8*l.* and 10*l.* And this, it will be observed, inexclusive of our General Liverpool List of Prices of Shares, which will be found in the last page.

Name.	Capital.	Val. of Shares.	No. of Shares.	Dep.
	£	£		£ s.
Arcade Company	80,000	50	1,600	5
Coal Company—Liverp. and Manchester	50,000	10	5,000	1
Timber and Saw Mill	100,000	10	10,000	1
Liverpool Fish	25,000	5	5,000	1
Liverpool and Manchester Fish	80,000	5	16,000	1
Liverpool Ale and Porter Brewery	200,000	20	10,000	1
Liverpool United Licensed Victuallers' Ale and Porter Brewery Company	150,000	10	15,000	1
Royal Rock Ferry	35,000	20	1,750	1
Newspaper, Daily—Prospec. not yet out.	..	..	..	..
Liverpool Fire and *Life*	2,000,000	20	100,000	1
St. George's Harbour and Railway	750,000	50	15,000	1
Chester and Birkenhead Railway	200,000	50	4,000	..
Chester Junction ditto	300,000	50	6,000	2
Steam Tug Towing Company	50,000	10	5,000	2
St. Geo. Chan. Steam, Pilot, & Tow. do.	75,000	25	3,000	..
Liverpool and Birkenhead Royal Brewery	300,000	10	30,000	..
St. George's Channel Fishing Co.	30,000	5	6,000	1
Harrington Dock and Improvement Co.	200,000	100	2,000	10
Royal Bank of Liverpool	2,000,000	2000	1,000	100
Imperial Bank	9,000,000	..	..	..
Liverpool Bank—not yet out	..	..	..	..
Isle of Man Bank	250,000	..	50,000	1
South Lancashire Banking Company	500,000	10	50,000	1
United Trades' Bank	..	..	..	..
Tradesmen's Bank	250,000	10	25,000	1
North and South Wales Bank	..	..	..	..
Tobacco and Snuff Company—not yet out.	..	..	..	..

Railways.—The Croydon Canal Company have been awarded 40,250*l.* as compensation for the injury done their buildings and land in Surrey and Kent by the Croydon Railway Company.

PARLIAMENTARY SUMMARY.

HOUSE OF LORDS.

Thursday, April 14.—The Birmingham and Gloucester Railway Bill was read a second time.—The Municipal Act Amendment Bill was referred to a Committee.

Friday.—The Marquis of Lansdowne moved that the resolutions of the Commons regarding Railway Bills be adopted; and he further proposed that evidence should be taken that the Commons' orders had been complied with. The motion was agreed to, after some discussion, and the additional resolution was printed for the purpose of consideration on Monday.

HOUSE OF COMMONS.

Monday, April 11.—A petition was presented against the Eastern Railway Bill.—The Dundee and Newtyle Railway Bill was read a second time.—The Newport and Swansea Harbour Bills were read a second time.

Tuesday.—Petitions were presented against the Glasgow Railway Bill; the Great Union Railway Bill; the Grand Junction Railway Bill; the London and Cambridge Railway Bill; the Cheltenham Railway Bill; and the Greenwich Pier Bill.

Wednesday.—Petitions were presented against the Great Northern Railway; Rennie's Brighton Railway; Midland Counties Railway; Eastern and Northern Railway; Glasgow and Forfar Railway.

Thursday.—Petitions were presented against the South Durham Railway Bill; the South Eastern Railway Bill; the Midland Counties Railway Bill; and the Great Northern Railway Bill.

Friday.—The second reading of the Dover Harbour Bill was deferred, to afford the opportunity of moving for a Select Committee on the subject, the Commissioners' management of the harbour being complained of.—The Mutiny Bill and the Marine Mutiny Bill were read a third time and passed; as was the abolition of the Slavery (Jamaica) Bill.

Uses of Slate.—Slate is becoming daily more extensively into use, it is being employed for paving the area in front of the new National Gallery, and also for church-yard memorials, in place of stone. It appears from a paper read at a recent meeting of the members of the Architectural Society, that a slab of Welsh slate, one inch in thickness, is equal in strength to a piece of Yorkshire stone of six inches, or of Caithness or Valentia stone of two inches in thickness.—*Times.*

MEETINGS OF SCIENTIFIC BODIES IN THE ENSUING WEEK.

SOCIETY.	PLACE OF MEETING.	DAY.	HOUR.
Royal Society	Somerset House	Thursday	8½ P.M.
Antiquarian	Ditto	Ditto	8 P.M.
Civil Engineers	], Cannon-row	Tuesday	8 P.M.
Society of Arts	Adelphi	Wednesday	7½ P.M.
Royal Institution	Albemarle-street	Friday	8½ P.M.

CONTENTS.

NOTICES TO CORRESPONDENTS.

ASCENT OF MONT BLANC.—It is due to our respected contemporary, the *Edinburgh Chronicle*, to acknowledge having taken the article from the columns of that paper.

PRICES OF METALS.—We have made arrangements for obtaining correct lists of the market prices of the day, furnished from a quarter where every confidence may be placed. It will appear next week.

EAST CORNWALL MINING COMPANY.—We have received a printed circular, and several statements, with reference to the management of this Company. We have inserted Mr. Budge's communication. We do sincerely advise the parties, whatever may be the squabbles among themselves, not to injure the concern by such intemperate observations and publications as those to which our attention has been directed; we doubt not there are faults on both sides, but the proprietary should not suffer from petty jealousies or angry feelings like those which evidently influence the parties to whom our remarks apply.

MINING CORRESPONDENCE.—Although the size of our paper is this week enlarged, we are compelled to defer the insertion of the correspondence of the Bolanos, United Mexican, Colombian, Union Gold, Bissoe Bridge, and other mining companies.

MAP OF THE MINING DISTRICTS.—We merely notice this that our subscribers may not consider we are unmindful of our promise.

ROYAL IRISH MINING COMPANY.—Some information is desirable.

THE MINING JOURNAL, And Commercial Gazette.

LONDON, APRIL 16, 1836.

Our observations on the proceedings of the "West Cork Mining Company" last week have, we are glad to find, excited the attention of the shareholders, and tended to remove that apathy which has hitherto existed. We are not so presumptuous as to suppose for one moment that any observations of ours could effect this; but supported as we are by the accounts referred to, it needs no argument to enforce on the proprietors the necessity of inquiring into the state of the affairs of this Company.

We now return to the subject, and shall not mince matters. By our remarks of last week, and the abstract of accounts, it appeared that the cost of Salvador House establishment, and salaries of officers, are about 7,000*l.* per annum; that, exclusive of this charge, the expenditure in working the mines was 17,584*l.* 5s. 8d., that the produce sold amounted to 3,804*l.* 16s. 11d., and that the Directors had declared TWO DIVIDENDS out of the PROFITS. With reference to the purchase money of 165,000*l.*, on which we stated it appeared that about 130,000*l.* remained unpaid, we should have remarked (although it was self-evident) that this applied to the accounts made up to the 31st December, for, as the whole capital has been since called for, that is, in all 50*l.* per share on 3,300 shares, or 165,000*l.*, being the *exact* amount of the purchase money, it is apparent that about 90,000*l.* *must* have been subscribed since 31st December last: assuming, as we have a right to do, that all the shares are *paid up*, more particularly as the Directors are endeavouring to raise additional capital under the powers vested in them by the Act of Parliament, and to which we shall have occasion immediately to direct attention. We will, however, see whether this encreased capital, allowing them to go to the full extent, will be sufficient to meet the engagements entered into and current expenses—The capital already called for is 165,000*l.*, to which add the amount which, under the Act, may be raised of 55,000*l.*, making in all 220,000*l.*—Now for the expenses—We have, purchase money, 165,000*l.*; expenditure up to 31st December last, exclusive of purchase money, 45,406*l.* 15s. 2d.; together, 210,406*l.* 15s. 2d., or about 10,000*l.* less than the entire capital of the Company, nearly the whole of which surplus will be required to pay the salaries of Directors and officers for the current year, to say nothing of the expenditure on the mines. It *may* be said that there is 16,000*l.* worth of produce on hand, and 160,000*l.* worth *in sight*—and we know that this *is* said. This, however, reminds us of 1825, and the statement made at a meeting of the Arigna (another Irish) Company. One of the Directors on that occasion got up and said—"Why, gentlemen, you have only expended up to the present time about 9,000*l.*, now I am prepared to show that we have actually made a profit of upwards of 10,000*l.* on such outlay; we have on hand 6,000 tons of ironstone (forgetting that it was included in the original purchase), and as three tons of ironstone is equal to one ton of iron, it is, as a matter of course, that we have 2,000 tons of iron.—Now, multiply this by the present price of iron, of 10*l.* per ton, it must be apparent to the proprietors present that our stock is worth 20,000*l.*; and, deducting the expenses, and 1-10th for contingencies, here we have a net profit of 10,000*l.*" The *innocents* believed it at the time—and not for a moment considering that the ironstone by itself was worth only 4s. 6d. per ton, never even reflected on the cost of the coal required to smelt it, and that of manufacture. Truly, this is a case very similar; and the 160,000*l.* worth of ore, we believe, may be fairly made out, and even increased, if the worthy Managing Director only calculates that as one fathom of ground is equal to, say, 20*l.*, so is the value of the set, taking as the bases of his calculations the length and breadth, with depth according to his wish.

We shall now proceed to make some observations on the Act of Parliament, whereby the proceedings of the Company are governed, and that we may not be considered as having put a false construction on the words or meaning of the Act, we will, for the information of the proprietors, many of whom, we dare say, have not read it so closely as we have, make some few extracts. At page 34 of the copy now before us, we find the following:—

Provided also, that no dividend shall be made, whereby the actual capital for the time being shall be impaired or in any degree reduced; and that the Chairman and Directors who shall concur in making such dividend, shall be personally responsible to the proprietors, and also the creditors of the said Company, for any injury that may arise therefrom.

Now we will ask the proprietors merely to refer to our last number, in which is a faithful abstract of the accounts made up to the 31st December, and then to determine for themselves whether the Directors have not either vitiated the Act of Parliament by acting in direct opposition to the clause, or otherwise whether they are not guilty in the eye of the law of a misdemeanor. We have no legal experience to justify us in arriving at the conclusion, but we think there can be little doubt upon the subject.

The next clause to which we would direct attention will be found at page 28.

And be it further enacted, that the said directors shall cause the books of the said Company to be balanced up to the 31st day of December, 1834, and up to the 30th day of June, and 31st day of December, in each succeeding year, or to such other period or periods of each year as any general meeting shall from time to time appoint; and the said books being so balanced, shall, from time to time, be examined and signed by the auditor, and approved by the said directors; and an abstract of the said balance, showing the state of the receipts and disbursements, and the debts and credits, funds and property of the said Company, shall, from time to time, be signed by the said auditors, and shall be respectively produced at the general meeting of the said Company, to be held upon the first Wednesday in the months of February and July in every year, or within thirty days thereafter; so that any of the proprietors attending the meetings may have an opportunity of inspecting the same, and shall be forthwith afterwards printed and circulated amongst the proprietors; and every such abstract, after the same, with any alterations or corrections which may have been made at any meeting of the Company, shall have been approved of, either at the general meeting of the Company at which it is to be produced, or at any subsequent general meeting, shall be signed by the chairman of such meeting, in testimony of such approval; and thereupon and thenceforth the same shall be binding and conclusive on all the proprietors of the Company and their respective executors, administrators, successors, and assigns, unless some manifest error or errors, to the amount, in the whole, of fifty pounds or upwards, be discovered therein by any one or more of the proprietors of the Company, within eight calendar months after such approval: in which case, such error or errors, and only such error or errors, shall be rectified by the committee of Directors without delay; and the abstract so corrected, shall be produced at the first half-yearly general meeting which shall be thereafter held; and thereupon the said abstract shall be, in all respects, binding and conclusive on all the proprietors, and their respective executors, administrators, successors, and assigns.

From this it is apparent that the Directors are *bound* to have the books balanced half-yearly, while the shareholders are equally *bound* by such account, if that no error be detected within eight months from the same having been submitted at a half-yearly meeting and approved. Now, we would recommend the proprietors to examine the books, balanced according to the Act of Parliament, and to refer to the ledger folio, where PROFIT AND LOSS appears at the head of the page; and if the accounts be properly balanced, and which we have no reason to doubt but is the case, we consider that the eight months, from the 3rd of March last, when they were presented, will not elapse without some one proprietor availing himself of the power afforded him by the Act of detecting and exposing "some manifest error or errors, to the amount in the whole of fifty pounds or upwards."

A clause, at page 21, nominates the Directors, who are to remain in office until 1838 (removable for "negligence or misconduct in office or other reasonable cause," vide p. 24), and in which we find the names of E. S. RUTHVEN, JOSEPH PIKE, R. WARNEFORD, S. JACOB, W. W. ELLIS, G. PRICKETT, and F. G. MOON; Mr. JOSEPH PIKE being "the first and present Chairman of the said Board of Directors, and Managing Director of the affairs of the said Company." Now, if we mistake not, and if our information be correct, the "Managing Director of the affairs of the said Company" has, if not the management, at least something to do with the affairs of Lord AUDLEY, the vendor of the said mines, at the said price of 165,000*l.* And perhaps it would be well here to inquire, whether such purchase was made on the report and recommendation of those scientific gentlemen noticed in their prospectus, as having examined the ores, &c.; viz. Messrs. R. GRIFFITH, R. FRAZER, A. MURRAY, J. R. BAKEWELL, and W. H. POTTER, one or all; or, if not, on *whose* report and recommendation were the mines purchased at 165,000*l.*, when, as we have before observed, they had been previously abandoned for 10s. consideration by the Mining Company of Ireland. If those gentlemen did value the property at such amount, we do not presume to offer an opinion in the slightest degree opposed to them, sensible as we are of their superior ability to ours in forming an estimate of this nature; but in such case there must be something wrong in the management, for we find that shares in the "Consolidated Mines" in the county of Cornwall, yielding dividends of 30 to 40,000*l.* per annum, may be purchased at a less amount than that named as the value of a mining set in Ireland, without machinery (except in the formation of the Company), or indeed any thing but anticipated results.

We were about closing our observations on the present occasion, for we have yet much to say, which next week will disclose, when our attention was directed to the proposal of raising a portion of the 55,000*l.* on terms which we have no hesitation in saying are at variance with the Act of Parliament. Although our paper is enlarged on the present occasion, we cannot afford more space to this subject (would that it were more worthy); and the only apology we can offer to our readers for thus dwelling on the proceedings of a Company, in which we hope that few are embarked, is, that an *exposé* like the present may be a wholesome lesson to others.

We have in another part of our paper inserted the proceedings of the Wheal Brothers Mining Company, and regret that we should have occasion to speak otherwise than in terms of approbation of the undertaking, or the parties connected therewith.

The abstract of the accounts of the company which is here subjoined, will justify the brief observations we feel called upon to make. It appears that, up to the 31st of December last, dividends to the amount of 9,000*l.* were declared by the directors, whereas the quantities of ores raised and sold, without regard to the cost, was not equal to two-thirds of that amount; and it now appears that, taking into account all the ores raised since that period, and on hand (estimated at 4,000*l.*), the concern is 3,400*l.* in debt. Thus it is evident that dividends have been improperly declared. We acquit the directors of having wilfully misled the shareholders, but we must express our opinion that they have not exercised that vigilance which it was their bounden duty to have done.

DISBURSEMENTS.	£	s.	d.
To dividend	9000	0	0
Expenses and disbursements for 13 months working, to end of March, 1836	3056	8	1½
	12,056	8	1½
To balance against the mine to 31st March, 1836:—			
Brought down	3440	5	7½

PRODUCE.	£	s.	d.
By ore sold from March, 30, 1835, to January 6, 1836:—			
Gross	5847	0	0
Assumed value of ore on the surface	4000	0	0
Total assets	9847	0	0
Deduct ⅛th dues	1230	17	6
	8616	2	6
Balance	3440	5	7½
	12,056	8	1½

THE FUNDS

The British Funds have been very heavy all day, and some large sales in the Consol Market this afternoon, caused them to decline to 91¼⅛ money, and 91⅛ account. The Three and a Half per Cent. Reduced Annuities are 98⅛; and the New Three and a Half per Cents. are 100¼. Bank Stock is 213½ ex div., and India Stock 259 money. The transactions in the Foreign Exchanges have in some degree been affected by the state of the Money Market here, and the business effected has certainly not been done at any general improvement.

Spanish Bonds opened at 47¼, and advanced suddenly to 48⅜ money, and 48⅝ time; the closing price, however, was 48⅛ a ⅜ money, and 48⅜ to ½ time; Passive Bonds are 15, and Deferred 22⅜ a ½. Portuguese New Bonds are 84⅛, and the Three per Cent. ditto 54⅛. Brazilian Bonds are 85¼. Chilian are 48¼. Colombian are 33, and the Peruvian 27. Dutch Stock is 56¼ a ⅜, and the Fives are 101⅛.

The transactions in Railway Shares require little or no observation.

LATEST INTELLIGENCE.

BIRMINGHAM, APRIL 14.—METAL MARKET.—The price of COPPER remains firm; the present price of tile copper, 100*l.*; cake 102*l.*; B. S. 104*l.* cash.—SPELTER is rising. Our correspondent at Hamburgh informs us that 18*l.* 12s. per ton has been refused there, and that no purchases can be made at less than 18*l.* 15s., so that by the time it reaches this market, it will cost the importer nearly 23*l.* The price quoted yesterday in our market is 24*l.*—TIN has again advanced, but the coinage price is not yet permanently fixed. Our correspondent informs us that the advance is expected to be 5*l.* per ton; if that is the case, common blocks will be 111*l.*, and the other qualities of tin in *the same* proportion.

GEOLOGICAL SOCIETY OF LONDON.

April 13.—MR. LYELL, President, in the Chair.

The first part of a paper on Coalbrook Dale, by Mr. Prestwich, F.G.S., was read.

In this portion of the memoir the author minutely describes the boundaries, physical features, geological structure, and organic remains of this district.

On the east the coal field is bounded by a slight undulating line, ranging from Lilleshall to Bridgenorth; on the north-west by a line nearly coincident with the main road from Lilleshall to Watling-street, near Wellington, and thence by the Wrekin; on the west the boundary is broken by the gorge of the Severn, but is formed, in part, by the elevated ridges of Benthall and Wenlock; and on the south-east it is defined by the road from Much Wenlock to Bridgenorth.

The area thus circumscribed consists of a platform raised about 400 feet above the Severn at Madeley, or 500 above the level of the sea; the surrounding country seldom rising to a height exceeding 350 feet. It is intersected by numerous picturesque glens, including the celebrated defile through which the Severn flows at the Iron Bridge; and is traversed by several low hills, the most elevated of which is 746 above the level of the sea; but the Wrekin, which forms part of the north-western boundary, rises to the height of 1320 feet.

Though Coalbrook Dale has been long known to geologists as a point of great interest, and has been often visited by them, yet so complicated is its structure, that until the researches of Mr. Murchison in Shropshire, and the other border counties of England and Wales, the relative age of many of the formations underlying the coal measures was not determined. The Wrekin, Benthall, and Wenlock Edges, and other points, had been examined separately; but it is to the extended, as well as the combined examinations of that gentleman, that the thin zones of grey and liver-coloured sandstones, shales and limestone, near Broseley, have been proved to belong to a system of strata next in antiquity to the old red sandstone, and which he calls the Ludlow rocks; that the limestone of Wenlock Edge, Benthall Edge, and Lincoln hill, underlies that system of strata; that the shelly sandstone of Murrell's wood belong to a still older formation, to which he has applied the name of Caradoc sandstone; and that the micaceous flags and quartzose grits on the flanks of the Wrekin and Arcol hills, constitute part of a yet more ancient series of deposits, to which he has given the general appellation of Lower Silurian rocks.

Of the importance of these previous labours Mr. Prestwich speaks most fully; and he acknowledges that, unassisted by them, he could not have determined the true age of the formations subjacent to the old red sandstone. He likewise acknowledges the aid which he has derived from the labours of Mr. Arthur Aikin, in the same district; and from Mr. Austice, and the other gentlemen connected with the coal works.

Besides the formations mentioned above, which occur on the western side of the field, the coal measures are, in different portions of their outcrop, brought into contact with the old red sandstone, mountain limestone, new red sandstone, and protruded masses of trap.

Mr. Prestwich commences his account of the formations by describing the Lower Silurian rocks. These deposits constitute a narrow belt of highly-inclined strata around the Wrekin and Arcol hills, and are composed in the lower part of a friable, coarsely-grained quartzose grit, and in the upper of micaceous flags.

The Caradoc sandstones are next described; then the Wenlock shale and limestone; afterwards the Ludlow rocks, the old red sandstone, and the carboniferous limestone; and, finally, the coal measures. As the last are the most worthy of general attention, we shall confine our remarks to them. They are formed of the usual alternations of shale, sandstone and coal; and in those portions of the district where they are most fully developed, have been ascertained to consist of 135 beds, making a total thickness of about 250 yards. The colour of the first seventy or eighty beds, commencing at the top, is light grey, yellow, or red; that of the next twenty is very dark or nearly black, and that of the underlying strata is light. These distinctions prevail generally, but not universally. In

the upper part of the series clays and soft calcareous sandstones predominate; in the middle, argillaceous sandstones still indurated clays; and in the lower, hard finely-grained sandstones, occasionally micaceous. The beds of coal in the upper division of the series are widely separated, and extremely irregular; but in the lower they are thick, nearer together, and persistent throughout the whole field.

At different pits the beds vary greatly in number and thickness, in consequence of the thinning out of some and the interpolation of others: and the memoir contains a valuable series of sectional lists, obtained from the ground bailiffs. The following gives an account of the number of beds of coal at each of the principal pits, and the aggregate thickness.

	Yds.	Ft.	Inch.	No. of beds.		Yds.	Ft.	Inch.	No. of beds.
Hadley ..	15	0	0	16	Dawley ..	14	0	0	16
Saed's hill	14	2	2	12	Lightmoor	13	2	0	17
Malinslee .	11	0	10	13	Madeley ..	10	2	10	24
Langley ..	11	2	6	11	Broseley ..	7	0	9	13

At these points the coal measures are fully developed; and consequently the number and thickness in the coal strata does not arise from a diminution of the system, but in some cases may be accounted for, by the minor beds not having been deemed worthy of notice.

Next in importance to the beds of coal are the layers of argillaceous carbonate of iron. This valuable ore generally occurs in flattened nodules, constituting regular seams, which are distinguished by the names of Pennystone, the Chance stone, the Ball stone, the Ragged Robins, &c. Some of these layers extend throughout the field, but others are of local occurrence; and the aggregate number in a pit varies from two to seven. They are generally imbedded in shale, but occasionally in sandstone. In some parts of the district, and situated near the top of the series, is a bed of freshwater limestone.

The petroleum or tar spring for which Coalbrook Dale has so long been celebrated, issues from a thick bed of sandstone in the upper part of the coal measures. It yielded formerly more than a hogshead a-day, but produces now only a few gallons a-week. Another spring has been discovered, and petroleum is frequently found, to some extent, in working the coal. Titanium has been produced in considerable abundance in the iron furnaces. It often occurs in crystals of great beauty, but principally in amorphous masses. On examining some portions of hearth-stones belonging to a furnace which had been at work nine or ten years, Mr. Prestwich discovered lumps of titanium as large as a marble, cemented by a small quantity of iron. With respect to the original state of the metal he offers no remarks, but he says that in analysing some crystals of zinc, obtained from nodules of ironstone, he detected titanic acid.

The fossils contained in the coal measures are of great interest, as they occur in considerable abundance, and consist not only of terrestrial plants and freshwater shells, but also of marine testacea and other animals. On comparing this curious association of remains, so decidedly different in habits, with similar accumulations, Mr. Prestwich dissents from the opinion that the alternations of beds containing fluviatile shells with others in which marine preponderate, prove as many elevations and subsidences in the district as there are changes in the nature of the exuviæ. On the contrary, he conceives that the phenomena may be explained by supposing that the coal measures were accumulated in an estuary occasionally subjected to considerable freshes from a large river.

The following is a brief summary of the facts detailed in the paper:—

The lowest strata contain only terrestrial plants and freshwater shells.

Then succeeds a bed of argillaceous carbonate of iron, "the penny ironstone," enclosing a few vegetable remains and freshwater shells, but great abundance of marine testacea and remains of fishes and trilobites.

Next occurs a bed of sandstone, abounding in terrestrial plants of the most luxuriant growth; followed by strata of coal, sandstone and shale, containing shells, apparently, of the genus Unio.

These beds are overlaid by a stratum of hard, micaceous shale, enclosing ironstone nodules, with remains of fishes, the same as those in the Pennystone measures, plants, freshwater shells, and animals allied to trilobites.

The succeeding beds, amounting to many yards in thickness, afford only vegetable remains and freshwater shells.

The chance pennystone, the highest layer of ironstone, next occurs, and encloses, in great abundance, marine shells (Producta scabricula).

The uppermost strata of the coal series contain only plants.

In concluding this portion of his memoir the author offers a few remarks on the irregularity of the distribution of fossils in the same bed in different parts of the field, and of the greater uniformity of their occurrence in the lower than in the upper portion of the series.

The paper was illustrated by numerous sections and diagrams, and an extensive series of fossils, which was presented to the Museum of the Society.

WHEAL BROTHERS MINING COMPANY.

A meeting of the shareholders in the company was held, pursuant to advertisement, at the City of London Tavern, on Thursday, 14th inst., at one o'clock;

EDWARD BLOUNT, Esq., in the Chair.

The meeting was very numerously attended, there being, we should suppose, from one hundred to one hundred and twenty present. Much excitement prevailed throughout the meeting, and the various rumours which have of late been put in circulation tended to give a peculiar interest to the proceedings.

The chairman, previous to the reading of the report, briefly addressed the meeting, to the effect that the directors courted every inquiry, and that Mr. Malachy, who was present, was ready to answer any questions which might be proposed to him, and to afford every information touching the operations and prospects of the undertaking in which they were embarked. The chairman further observed that it was a special meeting, and that the proceedings of the day must therefore be necessarily confined to the specific objects.

The solicitor of the company having read the advertisement from the MINING JOURNAL convening the meeting, proceeded to read the following

REPORT.

The directors of the Wheal Brothers mine have felt it to be their duty to call this meeting of the shareholders for the purpose of laying before them a report of the present state and prospects of the mine, and a statement of the accounts of the company from its commencement in July, 1835, to the 31st of March last, and to explain the reasons for the postponement of the dividend for the three months last past.

Dividends at the rate of 18*l.* per cent. on the capital of 100,000*l.* for the months of April, May, June, July, August, and September last have been duly paid, amounting in the whole to 9,000*l.*, and the directors feel it due to the shareholders candidly to state that a portion of that amount was advanced by Mr. Malachy the manager, and a large shareholder in the company, on security of ores, and on a representation to the directors that the produce of the mine, then already in hand, was amply sufficient for the purpose, though it afterwards appeared deficient to the extent of 1,500*l.*, the amount of the last monthly dividend, and on a representation by him that it was not advisable to dispose of the ore until the Tamar Smelting company, then forming in the immediate neighbourhood of the mine, should be in a state to receive it. The terms required by them were such, that although the ores had been actually sent to that Smelting Company, Mr. Malachy did not feel himself justified on behalf of the shareholders in accepting their terms, and thus some delay occurred in the disposal of the ores, and inasmuch as the dividend had been then advertised, Mr. Malachy proposed to advance the money to prevent disappointment to the shareholders.

It appeared to the directors from the then state of the works, and looking to the prospects of the mine, that it would be better in future to pay the dividends quarterly instead of monthly, and they announced their attention in December last of thenceforth paying them quarterly.

The directors now beg to refer the shareholders to the report of Captain Cocking, of Gunnis' Lake Mine, under Thomas Teague, Esq., and Captain Thomas Penaluna, the manager of several mines in the Callington district, both wholly unconnected with the Wheal Brothers Mine, well experienced in silver mining for upwards of twenty years, whom they have thought it right for the satisfaction of the shareholders to call in for a report upon the present state of the mine, and they also refer to Mr. Malachy for an explanation of the causes which have for several months last past impeded the raising of ore sufficient to meet the dividends which the directors hoped would have been forthcoming on the 31st of last month.

The directors, however, feel great satisfaction in being able to assure the proprietors, on reference to the report of the mine, and to Mr. Malachy's opinion that the prospects originally held out to them are by no means diminished, and that the delay in the receipt of their dividends is only temporary, the state of the mine, according to such report, giving the fullest assurance of a speedy and large amount of produce, and the directors are happy to say that Mr. Malachy is of opinion that the raisings of ore are now sufficient to pay the monthly cost of working.

The directors regret that unfounded reports, circulated in the neighbourhood of the mine, and confirmed in a provincial journal, as to the result of the proceedings in Chancery, instituted against Mr. Malachy and the directors, by an individual putting forth a claim to an interest in the mine, and also to a claim preferred by the Duchy of Cornwall to the dues which are paid to Mr. Worth, as owner of the mine, as well as various other unfounded rumours, have produced a temporary depression in the value of the shares, and an opinion unfavourable to the mine itself. These reports no doubt emanated from interested parties, and the directors have much pleasure in stating, that they are assured by their legal adviser, that the claim to an interest in the mine by the party above alluded to, and who has attempted to enforce it by an appeal to the Court of Chancery, can in no event affect the interest of any of the shareholders, it being a question solely concerning Mr. Malachy, who has every confidence in the successful resistance of the claim; and with regard to the claim of the Duchy of Cornwall, the directors are also advised that the interest of the shareholders cannot be prejudiced by it, that question being solely between Mr. Worth, the landlord of the mine, and the Duchy.

The directors beg to invite the attention of the shareholders to the account of expenses of working the mine, and the produce which has already been realised, and the amount of ore now in hand to meet the advances which the manager has made (in anticipation of the produce of the mine) to carry on the workings, the sinking of a new engine-shaft, and the erection of a new and powerful water-wheel.

Whilst the directors regret that temporary and unavoidable circumstances, incident to all mining concerns, have occurred to prevent the immediate realization of produce sufficient to continue the regular payment of the dividends, and particularly the expense attending the sinking of the new engine-shaft, and the erection of the water-wheel, which are both very important objects as regards the future operations of the mine, and also considering the unfavourable state of the weather for sampling the ores, yet they are justified in referring to the confident opinion of Mr. Malachy that in three months from the present time the mine will be in a condition not only to pay all arrears of dividends, but to continue them up to that time, and insure their regular payment hereafter. EDWARD BLOUNT, Chairman.

GENTLEMEN,—In compliance with your request that I should explain to you, for the information of the shareholders, the reason why sufficient silver ore has not been raised from the mine to enable you from its proceeds to pay the dividends at the time appointed, I beg leave to say that in the month of June last it was in contemplation to have worked the mine by sinking the valley-shaft on the course of the lode by the power of the old water-wheel.

The inadequate supply of water from the very dry season, in addition to the difficulties arising from the contracted state of the shaft, and its being also on an underlay, compelled me to abandon this intention, and left me no alternative but to resume the sinking of the new engine-shaft, which being down twenty fathoms would enable me, by sinking ten fathoms more, to drive a cross-cut to intersect the lode at the thirty fathoms level.

The propriety of this arrangement cannot but be approved of by every practical miner, and will be apparent to all when it is understood that there will be nothing in future to prevent the uninterrupted operations on the lode and the continued raising of silver ore, and that whilst the lode is being explored at the thirty fathoms level east and west from the cross-cut the shaft will be sinking to a greater depth, and is now down to the forty fathoms level, and as the cross-cut from this depth will be only four fathoms, we shall soon be exploring at this level also on the course of the lode, and prosecute the shaft to the fifty fathoms below the adit, where the same will completely intersect the lode. These advantages could not have been obtained by carrying into effect the plan originally contemplated, even had a sufficiency of water-power enabled such to have been done.

It is presumed that enough has been said to satisfy all reasonable and intelligent men that every thing has been done for the interest of the company, and I feel confident that three months hence I shall have the satisfaction of proving the correctness of my judgment, and the realization of your most sanguine expectations. J. MALACHY.

[The report of Messrs. Cocking and Penaluna, with Mr. Malachy's letter accompanying the same, we must necessarily defer until next week.]

DISBURSEMENTS.

1835.	£	s.	d.
March, cost	176	1	6
April	197	6	9
May	193	16	6
June	218	4	2½
July	269	19	4
August	242	7	7
September	294	7	11
	1392	3	9½
To six DIV. to end of Sept...	9000	0	0
To Lord's dues	730	19	1
	11,323	2	10½

EXPENDITURE.

1835	£	s.	d.
March, ores sold	2000	4	0
April	1817	14	0
May	2029	14	8
	5847	12	8
Dressed ores on hand 100 t.	3000	0	0
Undressed do.	1000	0	0
	9847	12	8
By balance	1478	10	2½
	11,323	2	10½

The report and accounts having been read, Mr. Grout, one of the directors, rose for the purpose of affording to the meeting an opportunity of understanding the accounts, and accordingly submitted the following statements:—the amount of ores sold up to 31st December was about 5,800*l.*, those on hand were estimated at 4,000*l.*, making in all 9,800*l.*; from which was to be deducted the dues of one-eighth, or 1,225*l.*, leaving net value of ores raised 8,575*l.*: while on the other side were the following items:—dividends 9,000*l.*, disbursements on the mine, say 3,000*l.*, making in all 12,000*l.*; and deducting from which the value of the ores raised, there remained a deficit of 3,480*l.* 8s. 1d. Mr. Grout having referred to the chairman as to the accuracy of this statement, we understood that gentleman to assent to its correctness.

A shareholder then rose for the purpose of putting some pertinent and impertinent questions to Mr. Malachy, not only as to the state of the mine and the depth to which the shaft had been sunk, in the course of which he evidently had got out of his own depth, but with reference to reports which affected Mr. Malachy's character. The answers given by Mr. Malachy gave evident satisfaction to the meeting, he declaring that at that moment he held upwards of 1,300 shares in the company, and that he was ready to take the ores at the valuation (4,000*l.*) set on them by him. These questions and answers led to a very animated, and, we may add, angry discussion between Mr. Grout and Mr. Malachy, and it was only the urbanity and good temper of the chairman which quelled this unpleasant interruption of the proceedings of the day.

From the statements made by Mr. Malachy and Captain Ambrose Bray, who was present, it appeared that the rich sink going down from the twenty fathom level, and which they had been compelled to abandon, being "drowned out," was equally rich for silver at the moment of its temporary abandonment as at any former period: indeed, added Captain Bray, the stones of silver taken from the bottom of the sink, when under water, were richer than any he had before seen.

It may be necessary here to observe, that this point of the workings remains at present untouched, the thirty fathom level not having been driven to a sufficient extent to drain this part of the mine. From the statements made by Mr. Malachy, we gathered, that from this part of the lode 800*l.* worth of silver was raised in two days; and that, in driving five fathoms on the lode at the twenty fathom level, they extracted at least 2,800*l.* worth of silver, taking the level "six foot" high; and from the appearance of the lode going down, he estimated the value of the ore which would be extracted, between the twenty and thirty fathom level, at that point, at not less than 20,000*l.*

We have purposely avoided adverting to that bone of contention the "Tamar Smelting Company," evincing, as we consider, more good taste in so doing than did the gentlemen who took part in the discussion. It, however, served one end, it distracted the attention of the meeting from that which should have formed its most important feature—the accounts submitted, and the explanations which should have been afforded with respect to the dividends declared—and which were perfectly unjustifiable, if we read the accounts rightly.

That the concern is good in itself we can entertain no doubt; but the directors must be more vigilant.

It is only due to the board of directors, however, to state, that from the declaration of the chairman, it appeared they had not trafficked in shares, holding the number which they had originally taken, and that they had received no remuneration for their services. Mr. Grout in the course of the proceedings, however, stated that he had given directions to sell the whole of his shares, but which it appeared arose from causes totally unconnected with the value of the mine, or the estimation in which he might hold it.

The following resolutions were carried:—

That the thanks of this meeting be given to Mr. Malachy for having sent the ore to be smelted at Sheffield, and that he is entitled to the full confidence of the shareholders.

That the report now read, with the statement of accounts and documents, be printed for the use of the shareholders, together with the resolution of thanks to, and confidence in, Mr. Malachy.

The thanks of the meeting were then given to Edward Blount, Esq., for his able and impartial conduct in the chair.

MINING CORRESPONDENCE.

ENGLISH MINES.

PERRAN CONSOLS MINING COMPANY.

April 11.—The south branch of Mudge's lode (which I mentioned last week) appears now to be a distinct or side lode, on it we have a good prospect, and are now driving southward from Mudge's in two other places at adit level to cut it farther west. The ends of our levels are much the same as last week. The wood-work is put on the engine-house, and are ready for the engine materials. J. GRIPP.

TAMAR SILVER LEAD MINING COMPANY.

April 11.—We have had a great deal of trouble in clearing the shaft and cutting ground since my last report. We are still clearing the levels mentioned therein, but our progress will be retarded for want of the means of drawing away the stuff. The Chyandour, with our castings from Hayle, is expected to be here in two or three days, and we hope to get the steam-whim to work very shortly. THOMAS PETHERICK.

REDMOOR CONSOLS MINING COMPANY.

April 11.—The lead lode at the thirty fathoms level at Johnson's shaft continues promising and productive, as noticed in my last report, and the twenty fathom level driving north on it is very much improved; it is nearly one foot wide, yielding about one ton of very good silver lead ores per fathom. In sinking the engine-shaft, and in driving the twenty fathom level south from it, we have penetrated the elvan course, and have intersected a stratum of beautiful killas. We are extending the adit level from the cross-cut (about seventy fathoms north of Treleaze's lode) east, on a very regular and kindly lode, which has produced some very good stones of tin ore. WILLIAM PETHERICK.

EAST CORNWALL SILVER MINING COMPANY.

April 11.—Being desired by the deputation from the board to undertake the direction of these mines, I have to report that the operations which were noticed in last week's report are being proceeded with satisfactorily. We have to-day advice of the shipments at Hayle of the remaining castings for the plunger-lift, which will be fixed with as little delay as possible on their arrival. T PETHERICK.

POLBREEN MINING COMPANY.

April 9.—Our various operations in this mine are going on with as much dispatch and in every respect so favourably as we can reasonably anticipate, with the exception of the engine, which I regret to say is not in that forward state I could wish, owing as usual to the delay of the founders in not forwarding the necessary castings. I have the satisfaction of saying that the discovery at the flat-rod engine-shaft (so far as we can ascertain) is of a valuable description; we consider it at present worth 100*l.* per fathom. R. ROWE, Sen.

SOUTH WHEAL LEISURE MINING COMPANY.

April 9.—I have to inform you this week, that the walls of the engine-house are completed. At Landrew we have determined to clear some other old workings on the different lodes situated about seventy fathoms east of the part which we have already cleared, by so doing we shall be better able to form a more correct opinion of what may be necessary for future operations. R. ROWE, Jun.

EAST WHEAL STRAWBERRY MINING COMPANY.

April 11.—Our levels and pitches on Trewithen south lode continue as good as stated in my last report; and our sampling of copper ores will I think exceed in quantity what I then stated. The prospects on the tin lode at Orchard are very good, and the tributers who are working very spiritedly are doing very well. W PETHERICK.

WEST WHEAL BROTHERS MINING COMPANY.

April 6.—I beg to inform you the silver lode in the twenty fathom level at Lowe's shaft is increased from fifteen to twenty inches wide since I last wrote; the quality is precisely the same. I have strong reasons to suppose the lode will be much larger and richer ere long, as it appears to be opening in extending the level west. The man who will make some assays went underground with me (Thomas Notwell), who says it is exactly like the lode at Wheal Brothers just before they cut the rich bunch of silver. From his knowledge of the stratum, and versed as he is in silver ores, I think you may place the greatest confidence in him. J. CARPENTER.

HAYLE CONSOLS MINING COMPANY.

April 11.—My last informed you of our having holed to the old men's workings at Trevisigia mine, we have since been clearing with all the force that could have been supplied, but have not yet arrived at the end of the dead. In the ten fathoms level west, Lyon's lode is large (three feet wide), producing good stones of tin ore, with prospects of improvement as we get off from the influence of the fluccan. At Bunworgie mine, Ellwand engine shaft is being sunk at a satisfactory rate. In driving west on the north lode at the adit level, we have a good branch of tin ore, about eight inches wide. In the other parts of the mine no alteration worthy of notice since my last communication. At Hayle Consols the cylinder, cylinder case, &c., are fixed, and we expect to set the boiler this week. If we could be well supplied with the parts of this engine from the foundry, we should very soon get it working, an object for the accomplishment of which we feel no small degree of anxiety, and we are greatly annoyed at being obliged to wait so long after the time agreed on for its delivery; but nothing could have been done more than has been done by us in regard to pushing the founders, whose hands were never so full of work as at the present time.

ROYAL POLBERRO CONSOLS MINING COMPANY.

April 9.—The course of tin discovered last week still holds as good as ever, and it is supposed another furthright will, in a great measure, prove its future state and continuance. Another very excellent pitch has been also discovered at Crease's shaft, and the appearances here warrant abundance of tin. The tributers throughout the mine are doing better than at any time since the mine has been renewed, and the success of the last pitch has thrown a great spirit of discovery among the men generally. We shall carry on the assay of tin up to about the 20th inst. The men on the new lode can break one ton per hour, worth 30*l.* per ton as it is broken. It can be sold without stamping.

April 13.—I beg to observe that we have this day obtained an extraordinary price for our tin, viz. 70*l.* per ton. The smelters have observed, it is the finest parcel of tin that has been returned for many years: the sale included some of the bucked tin from the new discovery, which brought the price of grain tin.

ENGLISH MINING COMPANY.

Great St. George, April 12.—Accompanying you have the various monthly documents for February, and setting reports for April, to which latter I would beg to refer you for the state of the underground operations at each of the mines, which, taken as a whole, will not, I flatter myself, prove unsatisfactory. We sample to-day 1,165 tons, at Wheal Leisure 318 tons, and at Wheal Prudence ninety-two tons, amounting altogether to the very respectable quantity of 1,575 tons.

ROCHE ROCK MINING COMPANY.

April 11.—The ground in the cross-cut to come under Campbell's shaft is hard, which delays the bringing down of this shaft; the air also is bad, which prevents the extending the twenty-one fathom eastward till the shaft is holed. The twenty and the thirty fathom levels continue as reported last week, but the forty has improved as well as the sixty opposite the engine-shaft. The tutwork list of the setting on Saturday will show you the number of men on tutwork, the levels extending, and the prices given for driving, which in no case exceeds 3*l.* 3s. per fathom, excepting the cross-cut, which is 8*l.* per fathom; and this price, in many mines, would not be considered very high. J. TREGIDGAIL.

REDRUTH UNITED MINING COMPANY.

Wheal Uny, April 11.—The lode in the engine-shaft is promising, and will produce about two tons and a half of copper ores per fathom. Cock's shaft is holed to the thirty-two fathom level, and we have made a beginning to drive the said level west, which is about five fathoms west of the aforesaid shaft. The lode in the twenty fathom level, west of Cock's shaft, is just as was stated in my last. The lode in the ten fathom level, west of Cock's shaft, is about three feet wide, composed of spar, mundic, and a small quantity of copper ores. The lode in the thirty-two fathom level, east of the engine-shaft, is four feet wide, producing tin ores. In the twelve fathom level, east of Gooding's shaft, we are driving on the copper lode, which is south of the tin lode, and is about three feet wide, composed of mundic, spar, and a small quantity of copper ores. At Clyab we hope to find a lift, and secure the shaft to the twenty fathom level by the end of this week. We have set in the old workings in this mine a pitch on tin at 13*s.* from 20*s.* At Buckett's we have drained the old workings to the twelve fathom level, and are about to secure the shaft and find a lift to this level. The branch we are driving and sinking in the adit is poor. R. GOLDSWORTHY.

KERROW MINING COMPANY.

The very rough state of the weather has, during the last week, very much impeded our operations; indeed, such has been its character for the last six weeks, that our masons have not been able to work more than [illegible] of the time; however, we shall have every thing ready by the time [illegible] arrives from the foundry, which I understand is in a state of [illegible]. As we shall be at once able to raise some tin from Garland's [illegible] (which is the first lode discovered), we shall begin next week to [illegible] purpose of returning it, which will, of course, be so much [illegible] easily what may be risen in future operations. WILLIAM [illegible]

CORNWALL GREAT UNITED MINES.

Eastern District, April 9.—I write to say that next Saturday is our pay day. Every thing here is looking so very favourable, that I apprehend, by brisk work for a week or so, you will receive such reports as you could scarcely anticipate, except you were to see the stones of tin now on the table before me, which were taken out of Wheal Prosper adit (west) last night, from a lode about four feet wide, far superior to any thing we have had before, and with every probability of continuance, as we are now drawing near the old men's great workings on the backs of the lodes. Wheal Jenkin is also producing an immense quantity of tin stuff of such superior quality, that it leaves this no longer an adventure, in my opinion, for we only want additional stamps to make very considerable returns immediately.

THOMAS KITTOW.

BRITISH TIN MINING COMPANY.

Great Wheal Venture, April 11.—The middle lode is much the same as last reported, in size and quality. In stoping the back east we find the lode to be making down under the clay, which you have been in some former reports called to notice. We shall suspend stoping the back for the time, and commence driving the end on the course of the lode. By four men set to-day two fathoms, at 2*l.* 12s. 6d. per fathom, this will give in length of back, and I think will produce tin stuff sufficient to keep our mills to work. No particular change has taken place in any of the ends since my last report. Our sump men are persevering with their bargain, although the ground at present is making much against us.

ST. HILARY MINING COMPANY.

Wheal Leeds, April 9.—Captain William Lean reports that the new engine is sinking under the thirty fathom level to the forty; there is at present a hard floor of spar in the shaft, such as we have met with before; there is now only nine fathoms to sink to get to the ore bottom at the forty fathom level; they will cross-cut south at the thirty without delay, and unwater all the old workings from the twenty to that level. The new whim-shaft sinking west of the engine-shaft to the twenty for ventilating and working that part of the mine to advantage, is already down between eighteen and nineteen fathoms; a fluccan branch has crossed the twenty fathom end, driving east, and the ground is confused, but the lode, in appearance, improved; the ground in the cross-cut driving south at the twenty, to cut the south lode, is improved; the men had 80s. per fathom, they have now 65s. only. The tributers continue to make wages.

C. N. BEATER.

CARN GREY MINING COMPANY.

April 9.—In sinking under the twelve fathom level in the tin ground, we find that it dips fast in a westerly direction, and our twenty-two fathom level is not yet under it. We are raising tin stuff from the winze, and some of it is very good work. The appearances of Pitt's lode are very favourable; we are now driving by the side of it, and having opened it a sufficient distance, we shall then take down the lode, and will duly report its quality. We are progressing as fast as possible in the deep adit towards Elder's lode, and, in order to prove it more effectually, two men are now driving in the eastern part to cut it in that direction. The lobby for the stamps is complete, and we shall begin to heave in the wheel in a few days.

W. BROWNE.

ALBION MINING COMPANY.

April 12.—Wheal Liberty engine-shaft is sunk under the sixty fathom level about seven feet; we find the lode to be large and kindly, producing large and good stones of ore. The lodes in the sixty fathom levels east and west from shaft is still very large at this time, but ore yielding little or no ores. The forty-seven east on the caunter produces about half a ton per fathom. The lode in the forty east on the caunter is about fourteen inches wide, ores imbedded in soft channel of ground. The forty east and west from shaft, each of these ends produce a little ore, but not rich. We have commenced sinking the engine-shaft under the fifty-four fathom level at Wheal Mithian; have not taken down the lode as yet, the appearances of which will be given in our next. In the ten fathom level west from shaft on the south lode, we have a leader of mundic, five inches wide up and down the end, the same level east from shaft lode is about eighteen inches wide.

JOHN MIDDLETON.

WEST WHEAL BROTHERS MINING COMPANY.

April 9.—The silver lode at the twenty fathom level in Lowe's shaft has been extended west eight feet and east four. It still continues from eighteen to twenty inches wide, composed of white iron, fluccan, &c. Samples have been assayed, producing 2,240 ounces of silver per ton. When the level is driven a few fathoms east and west, we shall be in a situation to break down the backs; no doubt between the eleven and twenty fathom levels considerable quantities of rich ores will be raised. The sinking of Lowe's shaft is resumed, which I intend to prosecute with all possible speed, until it intersects the silver lode. The eleven fathom level will be driven when the water is drained, as a communication shall be made from thence to the twenty at the earliest convenience. The copper lode in the twenty-three fathom level going west is four feet wide, with stones of copper and tin ore very promising. We are taking down a piece of ground in the level going east, to ascertain the size and quality of the north branch. Since writing the above, Thomas Knotwell has tested a sample of the fluccan and soft parts of the lode, and the produce is 298 ounces per ton. I have sent some specimens by the coach.—N.B. An average sample of the stones sent to London has been assayed by Mr. Johnson, of Maiden-lane, and the produce is 2,531 oz. 15 dwts. of silver per ton.

JAMES CARPENTER.

BRITISH COPPER MINING COMPANY.

Great Wheal Charlotte Mine, April 13.—The lode in the fifty-two west is from six to eight feet big, yielding from two to three tons per fathom. In the back over the end the lode is six feet wide, producing two tons of ore per fathom. The lode in the fifty-two fathom level east is much the same as last week, but in the back over the end it has not only improved in quality, but speedier and more easily broken. The lode in the forty-two east is from six to nine feet wide, yielding good work, improved during the last week. The lode in twenty-two fathom level west is three feet wide, leader from four to six inches big, the remainder good work. The other parts of the mine are much the same as last week. I have a mind to sample 200 tons or more next Tuesday week, but in the present state of the work cannot tell to twenty or thirty tons how much we shall be able to sample.

TRELEIGH CONSOLS MINING COMPANY.

April 9.—In our adit level on the north lode the end is just as named in my last report, but in the back of this level the lode is greatly improved, it is eighteen inches wide, all saving work; in other places there is no alteration, the engine-shaft men have nearly completed the plot at the ten fathom level, when I intend putting to cross-cut for Maria lode in this place, and fix the house water-lift from deep adit. The masons are getting on with the building, and hope to have the roof on in a fortnight. We have not received any part of the engines, but are expecting them every day.

WILLIAM SINCOCK.

FOREIGN MINES.

IMPERIAL BRAZILIAN MINING COMPANY.

[*Continued from No. 33.*]

Gongo Soco, Dec. 18, 1835.—In presenting you our report of the last ten days' work carried on in this mine, we regret that we have to state that the veins continue hitherto poor. A rise has been completed to the fourteen from the twenty-one fathom level, west of Aveline's shaft. We have had a few runs in the mine, and in the deep adit during the late rains, on which account very little has been done in the forty-eight cross-cut, the men having been removed to secure the adit, which is not as yet completed, and we are obliged to suspend our workings in the seven fathom level and in the back of the same at Macfarlane's and John's shafts until the rainy season is over.

WILLIAM TREGONING, N. HARRIS, W. BRAY.

Gongo Soco, Jan. 19, 1836.—We are not favoured with any intelligence from England since we last had the honour to address you on the 9th inst., whereof the foregoing is a duplicate.—We rejoice to find that a little gold appeared *from the mine*, but we are not given to understand that there is any great hope of the continuance of such produce; we trust that the mine report may say something on the subject.

JOHN MORGAN, R. HICKSON.

Rio de Janeiro, Feb. 6.—We wait upon you with duplicate of our respects of the 23rd inst., per Three Sisters, and though the present opportunity is not thought to be a good one, we avail ourselves of it to announce to you the arrival of Mr. Hammond from Gongo Soco on the 27th inst., with 96 lbs. 4 oz. 10 dwts. of gold dust, and a barrel of mundic, which we are to forward to you by the first good opportunity. We look hourly for the Nightingale Packet.

NAYLOR, BROTHERS AND CO.

Rio de Janeiro, Feb. 6.—We confirm, and beg your reference to the annexed copy of our respects of the 30th ult., and are since without your favours, the Nightingale Packet being still out, and had not reached Bahia on the 29th ult. We enclose the committee's dispatch of the 19th ult., and shall ship the gold brought by Mr. Hammond in the British merchant brig, Urania, Captain Berry, for Cowes; we expect our next letter will be by the Urania, and we have the honour to be, &c.

NAYLOR, BROTHERS AND CO.

Gongo Soco, Jan. 9.—The foregoing is a copy of our letter, since which date we have been honoured with your dispatch of the 3rd November. We observe with pleasure the appointment of your chief commissioner, George N. Duval, Esq., and note that he was to leave England in the beginning of December, we consequently hope to see him at Gongo next month. We beg to assure you that your call upon us shall not be disregarded, and you may rely on our cheerful endeavours to afford Mr. Duval every assistance and information in our power towards establishing him in that position which will give him a speedy insight into the affairs of the association, and which we look upon as a gratifying duty we are bound to perform. We have the gold to the 31st December, 120 lbs. 6 oz., packed ready for the Troop, which is to leave this to-morrow morning, under the charge of Mr. Hammond, for Rio, where we trust it will arrive in safety about the 20th inst. We forward by the Troop a cask with about half a cwt. of mundic from Cata Preta, as requested in your letter of the 1st September last. We are exceedingly sorry to state that on the morning of the 2nd inst. Skerrett's shaft fell in, dragging with it an extent of several fathoms of the surface surrounding it, &c. &c., which will we trust be fully stated to you by the chief mine captain in his report; we understand that the idea of re-opening it as a shaft is wholly abandoned. Yet in mentioning this calamity, we have one very consoling observation to add, that only the night before men were working in the shaft, and that although the accident happened at a time in the morning (seven o'clock) when a great number of persons, Europeans, natives, and blacks are usually passing the thoroughfare on the very edge of which the shaft was situated, not a single individual was injured.

One of your oldest negresses, Maria José, the matron of the hospital, and the wife of José Joaquine, the feitor of that establishment, in which situations they have both been always considered invaluable servants, having since the freedom of the husband by Colonel Skerrett looked forward to the same boon (which she was in some degree led to expect, as Colonel Skerrett had recommended her to Mr. Aveline as one of the first objects worthy his consideration for the blessings of freedom), and consequently suffered considerably from disappointment since Mr. Aveline's death; we found her health sinking under it, and were strengthened in this belief by the opinion of Mr. Collier, we therefore felt we should only anticipate your benevolent wishes in assuring this old creature that she might consider herself a free woman from the first of the present year, which we hope you will gratify us by approving of. You may be satisfied that this old couple are, if possible, more attached to your service, and will never think of quitting it.

JOHN MORGAN, R. HICKSON.

Workings from Jan. 9 to 18.—Eight days, 10 lbs. 4 oz. 7 dwts. 22 grs.—13 lbs. 11 oz. 17 dwts. 10 grs.

The produce from the 29th Dec. to the 8th Jan. (the particulars of which have not yet been received) amounted to 9 lbs. 6 oz. 18 dwts. 12 grs. The produce of the half year ending December 31, 1835, amounts to 408 lbs. 6 oz.

REAL DEL MONTE MINING COMPANY.

[*Continued from No. 33.*]

Mineral del Monte, Feb. 6.—I wrote to you on the 4th ult. and have since received your favour of the 9th November. In forwarding you the usual monthly reports, I have, with respect to the mining affairs, nothing of importance to communicate. The sinking of the Dolores diagonal shaft proceeds satisfactorily, and is now about twelve varas below the level of the bottoms, but I am sorry to say there is no increase of water; the sinking proceeds at about the rate of a vara per week, so that I think we may reasonably hope to drain the bottoms in a short time. In driving the 197 vara upper level, east of Dolores shaft, which you are aware is proposed as a level for ventilation for carrying the adit eastward to San Ramou, we lately very unexpectedly cut into the old San Vicente shaft, which being upon the north part of the vein, we were nearly missing it. It is six varas long and very completely timbered, is open for twenty varas above the level, but full below; but to what depth it reaches we cannot yet ascertain, but think it probable it may have been carried below the adit, although it is not seen there. Its having no communication with the adit, and other circumstances, prove it to be one of the works formed prior to the Regla family getting possession of these mines. We have frequently heard the old miners of the neighbourhood speak of the old Vicente bottoms as having been a very productive place, &c.; but as nothing of the kind appearance in the adit, nor in any of the other workings which we have seen, we were not disposed to rely much on these reports. We now propose to drive north on the adit level, expecting we shall cut it there, and shall probably soon have an opportunity of examining to what it may lead. We have discovered an old level going east of this shaft twenty varas, at two varas only above the 197 vara level, we shall, therefore, by cutting it down, make it answer our purpose. The rise, which I noticed in my last report as having been commenced at seventy-five varas east of Dolores to reach the 197 vara upper level, has already been communicated to the old level, already noticed exactly at this end. The 197 vara upper level, therefore, the cross-cut for which from Dolores shaft was begun the latter part of June, will have proceeded at a rate much greater than we had expected, and will soon begin to be useful in carrying on operations eastward. You are aware that we are driving the 137 vara level east of San Cayetano, and the 116 vara level west of Dolores; the communication of these two levels having for its object to relieve Dolores engine by taking off the water to San Cayetano, at a lower level than that in which it is carried at present. In the 137 vara level the lode has lately very much improved in appearance, and has lately produced several bags of good smelting ore; we look to it, therefore, with some interest at present, especially as there is yet a distance of more than ninety varas to communicate. In Terreros shaft the ground has lately been harder than usual, and the sinking has consequently been retarded. There is no altercation deserving notice, either in the levels or the labores near Santa Teresa and Terreros shafts. The clearing and securing of Guadalupe shaft proceeds as favourably as we could expect, although it is attended with difficulty, on account of the large rocks met with. I beg to refer you to Mr. Lanknu's letter, wherein he enters fully into the subject of the grinding by the Regla arrastres, and shews that, notwithstanding the delay, the result is in favour of grinding the ores to a very fine state. The operations at Sanchez are still greatly retarded by the frost, which has continued rather longer than usual. Since my last I have carefully dialled down the old Acosta shaft and adit cross-cut, as a check against Captain Hoskins, and having brought the work to agree, the men are now opening ground in the adit, preparatory to rising against the part sinking from the surface. There is nothing else deserving particular notice in the branch mines.

JOHN RULE.

BOLIVAR MINING ASSOCIATION.

Aroa Mines, Feb. 5.—I beg to acquaint you with the particulars of our proceedings in the mine since my last of the 6th January.

Santa Catalina Level.—We have been driving north-east from Bawden's winze, and the cross-cuts east and west, but have not extended far during the last month for want of peons. The lode in these stations is very large, but the ore is not rich enough to send away for shipment without being previously treated by the new process.

Middle Level.—We are driving a level east from the inside pass in this level, and under Richards's cross cut; the lode we are driving upon is large, and consists of ore of good quality.

Long Ladder Winze.—In this part of the mine we are sinking a winze from a level six fathoms above the Santa Barbara level, and which will communicate with the middle level underneath. We find the ore rich, and the lode at present two feet wide.

Santa Barbara Level.—We are still securing this level, and have been well repaid for what we have done by the rich grey ore we have discovered. On the whole the mine is looking better than when I last wrote, and we hope to raise a greater quantity of ore this month.

Summary of proceedings for January.—Ore brought out of the mine, 500 tons; selected for shipment, 288 tons, produce 30½ per cent; reserved for burning, 212 tons; regulus made, 72 tons, produce 41 per cent.; ore sent to Palace station, 301 tons; regulus sent to ditto, 57½ tons.

New Process.—We have made several trials of this process upon our ores, all of which have been successful. The first trial was made upon 4,000 lbs. of ore, from the large pile that has been burning since the 28th August last; the produce of it was 20½ per cent., which, after undergoing treatment, was reduced to 2,450 lbs., the assay of which then gave 39½ per cent.; the result is, that the weight of the ore was reduced 38½ per cent., and the produce increased 95 per cent. The second experiment was on a parcel of 6,000 lbs. of ore of poorer quality, say 18 per cent., and which had only been burnt four weeks; after treatment it gave 3,200 lbs., assay 25½ per cent. These 3,200 lbs. were again burnt and treated in the same manner; the result was a further diminution in the weight to 2,400 lbs., which, upon being again assayed was found to yield a produce of 29 per cent. The result of both operations is a reduction in the weight of the quantity operated upon of 60 per cent., and an increase in the produce of 61½ per cent. We also made two other trials: one upon ten tons of ore of 14 per cent., which was raised to 28½ per cent.; and the other upon a further quantity of ore from the large heap, which afterwards gave a produce of 30 per cent. These experiments completely establish the practicability of the new process. We shall now begin to operate upon larger parcels, for which purpose I last week set fire to a heap of eighty tons, and since to another of 100 tons. Next week I intend putting fire to two further piles of 120 and 80 tons each.

JOHN CARTHEW.

MOCAUBAS AND COCAES MINING COMPANY.

Cocaes Mine, January 8.—We continue to make very great progress in driving the new adit to M'Donnell's shaft; from A to C (section sent last post) is completed, having holed the ground between the shafts B C since last report; but I am sorry to say that we were obliged to abandon sinking the shaft D on account of the looseness of the ground and the quickness of the water, consequently all the ground between M'Donnell's and the shaft C must be driven from these two shafts, or with two pairs of men: these men are working under a promise of reward for extra exertion. There are now about seventy-seven fathoms of ground between the two ends; and if it continues favourable, it will be done in the time specified. The accompanying little plan, which agrees with the section sent by last post, will show its situation in the large map. The water in M'Donnell's shaft has so much increased, that our present power is scarcely sufficient to keep it under; and I fear that we shall not be able to make much progress in sinking until the completion of our new adit, when our present pumps will be superseded by the nine-inch iron working barrel, lately arrived from England.

At the Preja Grande we have not yet found a firm foundation for the new dam; and I fear, from our numerous experiments, that fix it where we may, we shall be obliged to drive piles to support the south end of the masonry. A smith's and carpenter's shop have been got up since the last report, which are all the houses that will be necessary. The Blacks can now be employed about the work of the dam.

At the Bandeira mine we have driven, since last report, about five fathoms; the lode, although large, has been very irregular, and the samples taken from it have been poor; but the jacotinga has been reserved for washing: that part of the lode upon which we have been making a trial backward in this level, and nearly over the line of the shallow adit, is very large and kindly, and shows gold in the batea; this stuff has been also saved for washing.

The canoas and skin launders for this part of the mine have been completed, but in order to avoid taking any water from M'Donnell's engine to supply them, we have been obliged to cut a new piece of leat, which has occupied us several days, consequently, we have not been able to commence washing till this morning. Our attempts to resume operations at Halfield have proved fruitless, and the water is still falling in great abundance through the stuff, which I expect is finding its way to the bottom of M'Donnell's.

At Antonio Dias and Manoel Tibis the lode is very poor, the end going west from Morgan's shaft is in disordered ground, consequently the lode is very irregular. In Waller's cross-cut the ground has been rather harder than usual during the last ten days, but it is again a little improved; between this end and the shallow adit end there are about twelve fathoms of ground yet to be driven through, which, on being completed, must, to a certainty, intersect all the lodes and branches, and will render this part of the mine very advantageous for working, as a tram-road will be laid down in Waller's cross-cut, and all the stuff broken from the lode will be drawn to the surface through Waller's shaft, when the present engine-wheel will be applied to work stamps for crushing it. In the ground in the deep and shallow adits there is no alteration.

I beg to acknowledge the receipt of the board's letter (original), dated 5th November, and their instructions shall be properly attended to. From their remarks respecting a cross-cut at Halfield's shaft, I think they are under a wrong idea as to the run of the veins; these veins, although apparently crossing the lode, always continue in it; it is therefore necessary to keep on the course of the lode whatever direction it may take to find them; this has been fully explained in the references to the large plan.

J. HITCHENS.

REVIEWS.

London and Edinburgh Philosophical Magazine, April, 1836.

The number for this month contains much valuable matter, but our space is so confined that we must necessarily limit our extracts to that of Professor Barlow's communication, which, treating on railways, may be acceptable to many of our scientific readers interested in that subject.

An amusing but not a very accurate critique of my Reports to the Directors of the London and Birmingham Railway Company having been recently published by Lieutenant Lecount, R. N., which must, I suppose, be considered as the last expiring groans of the fish-bellied rails, in which critique many of my formulæ are made to suffer woful transformations, allow me in their defence to make a few observations, and they shall be very few. The author commences his inquiry at page 20, and as an earnest of what is to follow, his very first step is to correct a simple trigonometrical expression I have given (which is perfectly right as it stands), and by his correction to render it ambiguous. With this corrected formula, however, after another forty pages, he contrives to prove what I have stated at page 19 of my Report, viz. that by taking a most injudicious form of parallel rail, we may get one inferior to the fish-bellied rail of the same weight. Now, my object has been to prove, on the other hand, that by choosing a judicious section we may get one as decidedly superior; and I have no doubt that thus far both conclusions are just, notwithstanding the ambiguity of his formula.

As it stands in my report, the expression is

$$\sqrt{(r^2 + d^2 - 2\,d\,r\cos x)};$$

and Mr. Lecount, not recollecting that the cosines in the second quadrant are negative, and that "minus into minus produces plus," has thought it necessary to make the alteration in question:—any student in trigonometry will judge with what propriety.

The next forty-seven pages are employed to prove that all my rules for the neutral axis are unfounded; which of course they ought to be, if all Mr. Lecount says about them be correct. I will not even suspect that he has designedly misrepresented and misapplied my investigations, but I must say that the result he conceives he has arrived at, page 107, is very far from a correct statement. It would seem, from what he says, that I give the ratio of 1 to 9 for all cases. Now, if he had properly understood what I had done, and if he had wished to have properly represented it, he would have informed the reader that I had given a rule which was general for all bars; and that as an approximate rule only, sufficiently exact for all practical purposes, I had stated that taking the neutral axis in the middle of the head was nearly correct for all the usual forms of rails, and, as it happens (the rail in question being five inches deep and the head an inch deep), the ratio in that particular case is 1 to 9.

The worst, however, is what follows in the subsequent chapters, where he compares my computed, or rather his computed, results with my experiments, and where by a very unaccountable blunder he mistakes through the other eighty-seven pages my columns of index readings for deflections, and pays me and my rules some very awkward compliments because the two do not agree. Now, I should have wondered very much if they had, for they might as well be compared with the column of sun-risings in any page of an almanac as with the column of numbers he has mistaken for deflections.

I have explained (I should have thought sufficiently clearly), at page 36 of my first report, what these numbers are, and how the deflections in the adjacent columns are obtained from them; and I must think that Mr. Lecount is the only person who has yet misunderstood them. I have called them in the head of the column, to mark the distinction, *deflections by index* in some places, and in others *index readings*; but in all the tables the adjacent column is headed *deflections for each ton*; and it is this column alone with which comparisons can be made; and I must repeat that I cannot help thinking that Mr. Lecount is the only person who has yet fallen into this singular error. If I had not a better opinion of his integrity, I should be almost inclined to think it was a designed mistake to make out a case in favour of the fish-bellied rail, but of this I most fully acquit him; but then to what am I to attribute it? I know but of one other explanation.

As an example or two of the kind here referred to, the reader will excuse my quoting the following. At page 109, he says, "Mr. Barlow gives the mean deflection per ton at ·015, and the deflection for 7½ tons ·107; whereas in the very same table, and only three lines above this deduction of ·107 deflection for 7½ tons, it is shown in the experiment that at 7 tons it was actually ·335, or three times greater than that which is deduced by this mode of proceeding for 7½ tons. *There is some mistake here evidently.*"

Evidently there is, Mr. Lecount, and it is this: you have mistaken my index readings for deflections: if you will look again you will find that you could not have found a better proof of the correctness of my deductions.

Again, page 151, Mr. Lecount says: "Mr. Barlow himself, p. 103, second report, states the deflection by computation, &c. to be from ·051 to ·055 with 11 tons, although in the same page, and only three lines above, the experimental deflection is registered from actual observation ·0717. What have we here to do with calculation or hypothesis? We see the thing before our eyes; the *rail does deflect* ·0717; and why are we told that it only deflects ·055?" Now, I say, the rail does *not* deflect ·0717: if Mr. Lecount will turn again to page 103, he will find that what he takes for "deflections by computations, &c. from ·051 to ·055," are the experimental deflections; and that ·0717, the number "before our eyes," is only the index reading.

Mr. L. thus passes through all my pages from 36, first report, to 103, second report, with a total misapprehension of my tables. I am sure, therefore, his readers will readily excuse his having occasionally misunderstood my deductions from them.

I might, if I had leisure, amuse myself and perhaps the reader with many other specimens of the author's ingenuity; indeed, I really think he has subjected himself to prosecution for the torture which he has inflicted on my differential equations; but I have, perhaps, said enough to show that my rules are not *quite* so ill-founded as Mr. Lecount would lead his readers to believe; at the same time I will readily admit that with all the varieties of iron only mean results can be expected, and "that two bars of the same weight and form will have different degrees of strength," &c.; but if I have fitted them to what iron of a good quality (not the best) ought to bear, it is all that I profess; and from many experiments made since my report was published, I have reason to believe I have succeeded.

Mr. Lecount concludes his preface by saying: "It requires a man of some nerve to face such a leviathan as Professor Barlow on mathematical points, but it was necessary *that some person should do it*, and it appears the lot has fallen on Jonah, with what advantages others must judge." Perhaps a little more attention to what he was reading with a view to criticise it, would have been better than mere nerve to have contended with his supposed formidable opponent. As to the advantages, I must leave that question to be settled between Jonah and his readers.

Six Months in America. By GODFREY T. VIGNE, Esq.

This work, which contains much interesting matter with reference to the United States, we have perused with considerable pleasure; but as those parts treating on the mineral riches more particularly interest our readers, our extracts will be confined, on the present occasion, to some observations

ON THE GOLD REGION IN THE UNITED STATES.

I will here introduce a few remarks on what is called the Gold Region in the United States, with the kind assistance of Mr. Damm, a Swedish gentleman, resident at New York, and connected with the Gold Mines. I have

selected them, with very few alterations, from the reports on the subject lately published by the Government.

It is now about thirty years since gold was discovered in North Carolina; it was found in the sand and gravel of different water-courses, first in Cabarras county, and soon afterwards in the county of Montgomery, in that state. Until within a few years past, the process of washing for gold was principally confined to the two counties just named. The greater portion of the gold thus procured was found in small pieces, varying in size from one pennyweight down to particles of extreme minuteness; at most of the mines, however, it is not uncommon to find pieces of a much larger size: for example, at Cabarras, a single piece has been found weighing twenty-eight pounds avoirdupois, besides several other pieces varying from four to sixteen pounds. The proprietor of the same mine affirms, that about a hundred pounds avoirdupois have been found, in pieces about one pound in weight; these large pieces, however, compose but a small portion of the whole product of the mines.

At a mine in Montgomery county, a number of pieces of about one pound weight have been found—one of them weighed four pounds eleven ounces, and another three pounds. In Anson county, during the summer of 1828, a piece of gold weighing ten pounds, and another of four pounds weight, together with a number of small pieces, were taken up out of the sand and gravel of Richardson's Creek. These discoveries have been chiefly made in or near beds of streams; but in some instances deposits of considerable extent have been found on the sides and tops of hills.

It was not, however, until about six years ago that the gold mines, properly speaking, were discovered in North Carolina—that is, gold in regular, well-defined veins. This discovery, like that of the alluvial deposits, was in some measure accidental. A person, while washing the sand and gravel of a small rivulet for gold in Montgomery county, observed that he could never find it beyond a certain spot in ascending the stream; but at the point where the gold seemed to cease, he discovered a quartz vein running into the hill on one side of the channel, and at right angles with the course of the rivulet. Having frequently taken up out of the bed of the stream pieces of quartz with bits of gold attached to them, he came to the conclusion that the gold found scattered below, must have come out of the vein of quartz; and he determined to pursue it into the hill. He had done so but for a few feet, when he struck upon a beautiful deposit of the metal in a matrix of quartz, and subsequently another in carbonate of lime. In following this vein about thirty or forty feet longitudinally, and at a depth of not more than fifteen or eighteen feet, he found a succession of what are technically termed "nests," from which he took out more than 15,000 dwts. of virgin gold. Soon afterwards the mine fell into other hands, and the working of the vein has been discontinued in consequence of the quantity of water which made its appearance, though it is understood that it will be resumed in a short time. This discovery of the metal in regular veins, presented the subject in a new and interesting point of view, and directed a search for gold among the hills and high grounds, and particularly for veins traversing the earth.

In the course of the summer, after the development of Barringer's mine, some valuable mines were discovered in Mecklenburgh county. The product of these, worked in the rudest manner, without skill or capital, was so great as to excite general notice, and stimulated the land-owners in that section to search for these hidden treasures. The mines now began to attract the attention of the public, and several persons of enterprise and some capital repaired to the spot. Some of them made investments, began to erect machinery, and worked the veins with system and regularity. The success of the first adventurers in this new enterprise, and for a time the attention of every body who sought to engage in the mining business, was exclusively turned towards Mecklenburgh county. The consequence was, a constant search for gold was kept up in that county, and not unattended with success, as many very promising veins were discovered. These Mecklenburgh mines were the first that attracted attention, and the first that were examined and worked with skill and management. They were, of course, greatly in advance of every other part of the region, and the products have been greater in proportion to the labour, capital, and skill that have been applied to them.

In the course of the succeeding year, a very extensive and rich vein was discovered in Guilford county, and it was soon operated upon by more than one hundred hands, who flocked in from the country around, and received permission to dig there. The discovery of one vein in a district, furnishes the means of finding others. The people of the neighbourhood visit it, examine the appearance of the ores, and other signs and indications, and thus, in some degree, are qualified to make a search on their own lands elsewhere. This was the case in Guilford county; the discovery of the first vein was soon followed by the opening of several others. The same plan will be followed in every district, until the Gold Region be explored, and the places which exhibit any external signs of gold be thoroughly known. About this time, Cabarras county, which had hitherto been only considered as productive in its washings, was ascertained to be a vein-mining district, and discoveries to the same effect were made about the same period at Lincoln.

It is less than two years and a half ago since gold in veins was first discovered in Davidson county, it having previously been found only in and near the beds of rivulets and creeks. Within the last few months, veins have been opened in the adjoining county of Randolph. Rowan, situated between Davidson and Cabarras counties, embraces a considerable section of the Gold Region, and contains many veins whose external appearance is good and promising. The metal is also found in the streams: some few veins have also been opened in Tredell county, and are now in a course of development.

While progress had been thus making in opening veins, and in ascertaining their situations, some valuable discoveries of stream deposits occurred in a section of the state of North Carolina, hitherto not suspected to be within the range of the Gold Region. In Burke county, one of the most mountainous of the state, and one, two, or more feet under the surface, a layer of sand and gravel is found, varying, from a few inches, sometimes to more than a foot in thickness; in this layer the virgin gold is found, generally in small particles about the size of a pin's head, and very often as large as a grain of corn; it is separated and collected from the accompanying matter by washing. Water is abundant, and the absence of clay and adhesive matter in the auriferous layer, makes the process of washing exceedingly easy. A number of these deposits have already been found, and some of them have proved to be very productive. It may be here mentioned that, in the adjoining county of Rutherford, gold in deposit has also been found; but, as yet, not much labour has been expended in that quarter. One vein, which is very encouraging, has been worked regularly; and another vein, of good expectations, has been discovered.

In short, the veins and places of deposit are very numerous, and scattered over the whole country, with a few exceptions; and the gold which is produced finds a market so readily, that it is difficult to give a very correct estimate of the product of the mines of the Carolinas, Virginia, and Georgia; but it was said to amount to 500,000 dollars in 1830, from North Carolina alone. During that year, nearly the whole gold coinage of the United States' mint was from native gold. The coinage was 643,105 dollars in gold coin: of this, 125,000 were derived from Mexico, South America, and the West Indies; 19,000 from Africa; 466,000 from the Gold Region of the United States; and about 33,000 from sources not ascertained. Of the gold of the United States above mentioned, 24,000 may be stated to have come from Virginia; 204,000 from North Carolina; 26,000 from South Carolina, and 212,000 from Georgia.

It may not be out of place here to remark, that hereafter the quantity of domestic gold that will be received at the Mint, will bear a less proportion to the whole amount found, than has been the case heretofore; the reason is this: hitherto, Philadelphia may be said to have been nearly the only market for the article; goldsmiths and merchants at New York, and other cities in the Union, were unacquainted with it; and therefore, for fear of deception, dealt but little in it; this occasioned the greater part of the gold to be taken to Philadelphia, where, if not sold to the goldsmiths or merchants, it was deposited in the Mint; so that, at all events, a portion of it always contrived to reach that establishment. But now the case is different; a market for the gold is opening in most of the cities of the United States; goldsmiths and jewellers, having ascertained its comparative purity, which is said to be greater than that of the gold of Mexico or the Brazils, will generally become purchasers for their own use.

That there will be an increase in the products of the mines every succeeding year, admits of very little doubt, when the gradual enlargement of the Gold Region, extending through Virginia, North and South Carolina, and Georgia—the number of persons turning their attention to the business—the mills that are now erecting in various places—the improvement in the mode of working and general management—are made the subjects of consideration.

The improvements in machinery have been considerable within the last two years: it is believed, however, that as yet they are far from being perfect. The defects in the present mode of extracting the gold are well known to those most extensively engaged in the business; and some of the miners, even at this time, are turning their attention towards the introduction of other methods, promising more economy and greater results.

Grinding the ore in water with the vertical stone, which is the method practised in Chili, is now the process most generally used; but the liabilities of the vertical or Chilian mill, to become disordered—the waste of gold and quicksilver—the irregularity of results from the same ores—the want of proper checks on the workmen, together with minor objections—will probably, in a few years more, cause these mills to be in a great measure discontinued, except in small establishments, and for certain classes of ores in the larger ones.

The auriferous veins of North Carolina and Virginia have not yet been sufficiently developed. As yet, not a single shaft in the whole range of country (except at the Charlotte mine, near a small town of that name, worked under the direction of the Chevalier de Rivafinoli), has been carried down to the depth of a hundred feet.

Seventy to eighty feet is the greatest depth yet attained; and thirty feet is more than an average on the main excavation: as far, however, as these experiments have gone, they furnish no reason to doubt the durability of the mines; for, thus far, the well-defined veins not only retain their first size, but in many cases become larger, and, more often than otherwise, improve in richness. This circumstance has given rise to an idea among the common workmen, that the vein grows richer about the time it reaches water. On the whole, when it is considered that in Mexico, Saxony, and other great mining districts, veins have been successfully followed downwards more than 2,500 feet, the probability that the veins in the United States will improve, is, at least, as great as that they will become poorer. Nor is it in the nature of things, that any considerable portion of the whole number of veins existing there, much less all of them, have already been discovered.

The usual way that discoveries are made, is to take some of the earth or gravel lying on the top of the rocks, and wash it in an iron pan. If any fine particles of gold are found, the vein is known to be auriferous, and its degrees of richness and value is judged of by a variety of circumstances. This fine gold, without doubt, comes out of the vein, the top of which had been disintegrated, and fallen to pieces. There are many bold veins in every district, the tops of which show no gold, whilst other indicating substances are abundant. The probability is, that some of them at a greater depth may prove highly auriferous.

ASCENT OF MONT BLANC.

Dr. Barry delivered his second and last morning lecture on this subject, in the Assembly-rooms, Edinburgh. We never saw any auditory listen with more intense interest to any prelection than on this occasion. Nor could it have been otherwise. Not only was the subject quite new, and in itself interesting and spirit-stirring, but it was treated in the most happy style, with an elegance of language, and a depth of feeling, that excited and captivated every hearer. Indeed, if we may judge from ourselves, the effect was extremely powerful, if not overwhelming. The dangers and hair-breadth escapes of the adventurous traveller and his guides—his animated and glowing description of scenery, particularly when on the summit of the mountain—his analysis of his own feelings and sensations, combined with many delightful and touching episodes, so simply and eloquently told—all these rivetted the attention and affected the heart of every listener. The expedition occupied three days; and, consequently, Dr. Barry and his attendants (six in number) slept, or rather spent, two nights on the snow. On the summit he made various meteorological and other observations; and the prospect he described as most overpowering and magnificent. He saw the Lake of Geneva, which is distant about fifty miles, lying as a pond, as it were, at his feet. He saw the range of Jura and the Rhone on the one hand, and the Appenines and the Po on the other, his eye reaching even to the heights of Tuscany, 200 miles off. The verdant valleys of Italy seemed lying below him; and, indeed, so far as the physical appearance of countries goes, he may be regarded, while standing on the apex of Mont Blanc, as having made the grand tour of Europe. A fire was raised at the summit, and the party enjoyed some refreshments; the mind all the while being engrossed with the intense interest which their situation inspired, and with the sublimity of the scene. The cold was not severe; and not a cloud, or the speck of a cloud, had been seen above the horizon during the whole three days. Dr. Barry left, with great regret, the interesting spot in its icy, silent, solitary magnificence, and justly observed that the remembrance of that interesting period, and the objects which excited that interest, can never be effaced from his mind, and that it will ever afford him associations of the most touching and vivid description.

The ascent of Mont Blanc awakens the most lively interest among the simple but amiable inhabitants of the celebrated valley of Chamonix, from which it is customary for the traveller to start. No person had ascended the mountain for rather more than four years before the period when Dr. Barry undertook this important enterprise; a circumstance which tended to increase the feeling in question. When he and his guides left the valley and entered on their great emprise, the interest was universal and intense; many tears flowed. Their progress both upward and downward was eagerly attempted to be traced; and so clear was the atmosphere, that they were descried, though with difficulty, on the summit. On their way downwards, when still a few thousand feet from the valley, a mountain-maid met them with refreshments; and among the crowds that welcomed them on their safe return was a very venerable old man of 73—Jacques Balmat—the person who first ascertained that the ascent was practicable, and who, in 1786, had accompanied the first traveller (Dr. Paccard, a Savoyard) to the top of the mountain. Dr. Barry stated that he was sorry to say, and we are sure the audience was no less sorry to hear, that Balmat had since perished, having ascended the heights in search of minerals, and never returned. Dr. Barry, on the night of his return, having asked his guides, Balmat, and other friends, to sup with him, the occasion may well be conceived as having been a peculiarly interesting and happy one. It may not be improper to mention that, on the following day, the Doctor, without much fatigue, travelled over the Mer de Glace to the other side of Aiguille Verte and returned; a distance, including the windings, of about forty miles.

Among other important collateral information communicated to his hearers by Dr. Barry, we beg to submit to our readers a list of the different ascents that have been made to the summit of Mont Blanc. It does not include guides, except Balmat, who, by climbing the mountain in search of minerals, had the honour, though accidentally, of first ascertaining the practicability of the ascent. He did not himself, however, quite reach the top till a year afterwards, when he accompanied Dr. Paccard. It may not be unimportant to observe that a mountain-maid, on one occasion, made the ascent, having accompanied a body of guides. In the following list the great relative number of Englishmen is very remarkable, being more than the half of the aggregate number. There is only one Scotsman who has performed the task.

List of Ascents which have been made to the Summit of Mont Blanc.

1786	August	8.	Jacques Balmat (guide of Chamonix), .. Doctor Paccard	Savoyard.
1787	—	3.	M. de Saussure	Ditto.
—	—	9.	Colonel Beaufoy	Swiss.
1788	—	5.	Mr. Woodley	English.
1802	—	10.	Baron Doorthesen..... M. Foruret.....	Courlandais. Swiss.
1812	Sept.	10.	M. Rhodas (Rodatz?)	Hamburger.
1818	August	4.	Count Matezesecki	Pole.
1819	June	19.	Dr. Rensseiaer ..... Mr. Howard	American. Ditto.
—	Aug.	13.	Captain Unbrell.....	English.
1822	—	18.	Mr. Clissold	Ditto.
1823	Sept.	4.	Mr. Jackson	Ditto.
1825	Aug.	26.	Dr. Edmund Clark ..... Captain Markham Sherwill.....	Ditto. Ditto.
1827	July	25.	Mr. Fellowes..... Mr. Hawes.....	Ditto. Ditto.
—	Aug.	9.	Mr. Auldjo.....	Scotch.
1830	—	3.	Captain Wilbraham	English.
1834	Sept.	17.	Dr. Martin Barry	Ditto.
—	Oct.	9.	Count de Tilly	French.

Thus, exclusive of guides:—

Savoyard	1	Hamburger	1
Swiss	2	Pole	1
Britons	12	Americans.....	2
Courlandais	1	French	1
	In all..... 21.		

The list contains 22, including Balmat the guide, through whom the summit was first gained.

We cannot conclude this article without again expressing the delight we felt, and the instruction we received on hearing Dr. Barry's admirable lectures; which we are sure neither we, nor any who had the privilege of listening to them, will soon forget. It is also proper to mention that the ingenious sculptor, Mr. Slater, is entitled to no small share of the praise, as his model of Mont Blanc, and the surrounding heights, while it was splendidly executed, afforded Dr. Barry an opportunity (of which he amply availed himself) of giving a distinctness and precision to his narrative, which, without Mr. Slater's aid, it would have been perfectly impossible to communicate.

STRIKE AT LEADHILLS.—It is with pain we state, that a misunderstanding has arisen between the employed and their employers at the village of Leadhills, and that the former, in the mean time, have dropped work, to the number, we believe, of two hundred. The workmen say, that when lead was low in price they never grumbled, having been led to believe that when better times came their circumstances would be improved; and as the mineral has advanced considerably, the miners consider themselves entitled to an augmentation of wages. At present the miners earn on an average about 18*l*. a year, and are allowed gardens, some of which are large, rent free. The cottages they occupy are built at their own expense, but these, on leaving the place, they are at liberty to sell, providing the purchaser be an inhabitant of Leadhills. We understand they conceive themselves entitled to 26*l*. per annum.—*Glasgow Constitutional.*

VOLCANIC ERUPTIONS.

In the history of volcanic eruptions, frequent mention is made of torrents of water and mud ejected by volcanoes. Bouguer and Condamine saw these formidable torrents tear up the surface of a whole country. Six hours after an explosion of Cotopaxi, a village nearly eighty miles distant in a straight line, and probably 140 by the winding channel, was entirely swept away by the flood. In 1698 the volcano of Carguarazo, contiguous to and probably connected with Chimboraço, sunk in, and covered nearly fifty square miles of country with mud. It is not, in fact, by burning lavas that the volcanoes of Peru and Quito exercise their ravages, but by torrents of mud and water. The mud, when first ejected, has the consistence of pap, but it speedily hardens; and occasionally contains so much black combustible matter, that the inhabitants make use of it afterwards for fuel. Sometimes the muddy waters that flow from subterranean caverns carry along with them a vast quantity of small fishes. These are a species of glutinous *pimelades (pimelodes cyclopum*, Humb.), of which the largest are scarcely four inches long. Their number is often so considerable, that by putrifying they breed a pestilence in the country. They are of the same species as those living in the native streams; from which it would appear that there are certain communications between the upper level of the volcanic lakes in the interior of the mountains, and the surface of the external land. The wonderful circumstance is, that they are raised up from that level 8000 or 9000 feet high, and ejected from the crater with very little injury.

The masses of water and mud, in the preceding cases, are probably due to local peculiarities. There can, however, be no doubt that the expansion of water by heat into steam, forms the eruptive agent which elevates and throws out the liquid lavas of volcanoes, as well as the showers of ashes and stones. The fountains of the Geysers in Iceland indisputably prove the volcanic agency of steam, so that Savery's engine is merely a miniature model of the mechanism employed by nature, on a magnificent scale, to give projectile force to her jets of hot water in Iceland. "For an hour and a half," says an intelligent traveller, "the column rose without interruption 130 feet high, being seventeen feet thick at its greatest diameter; and spouted up with such energy, that it retained near the top the same dimensions and the same figure as at the base. On throwing stones into the volcanic gulf, they were seen to mount instantly with the column of water, and even to reach a still greater height with astonishing velocity."

Great volcanic eruptions are usually accompanied with very heavy rains, which inundate the contiguous regions. The sea seems to sympathise with the agitations of the adjoining volcanoes; rising and falling in rapid alternation. We may ascribe to a similar oscillation the depression which it suddenly undergoes in the neighbourhood of a volcano, at the crisis of an eruption, caused by the sudden *deflux* of a great body of water into the vast volcanic caverns. Earthquakes and volcanoes are intimately related. They are, says D'Aubuisson, most likely the effects of the same agents, or subterranean fires. In the tremendous earthquake which destroyed Lima in 1746, four volcanoes were opened up in one night, and the agitation of the ground immediately ceased. The deeper seated the explosive forces are, the more extensive and sudden is the concussion. At Cumana, in 1812, the first shock lasted six seconds, the second twelve; then a very loud subterranean noise was heard, followed by a perpendicular movement of three or four seconds' duration, which was terminated by a longer continued undulatory motion. Nothing on the surface of the ground could resist these cross oscillations: the city was totally overthrown, leaving only the cathedral: the ocean was very violently agitated by earthquakes. At that which desolated Lisbon in 1755, even the British and Norwegian seas felt the shock; and at the same instant the whole land of Portugal and Andalusia vibrated. In Africa, when the cities of Morocco, Fez, and Mequinez were in a great degree destroyed, the sensation of the earthquake was perceived over a large portion of Spain, France, Switzerland, and Germany. The shock that ruined Lima was propagated across the continent of America, and the Atlantic Ocean, even to Europe. A violent earthquake which not long ago overturned some houses at Constantinople, caused a concussion at Petersburgh. On the 8th of September, 1601, between one and two o'clock in the morning, a considerable earthquake shook the whole of Europe and Asia.

Till Sir H. Davy's splendid discoveries of the metallic bases of the earths and alkalis in 1807 and 1808, no hypothesis explanatory of volcanoes had been offered which was entitled to the slightest respect. Ever since that most illustrious era, however, I have regarded the theory of volcanic action equally complete and satisfactory with most of our physical inductions. It is therefore peculiarly gratifying to find that its celebrated author has himself finally favoured the world with the development of views so entirely his own.

The metals of the alkalis and earths, from their paramount affinity for oxygen, could not possibly exist on the surface, but only in the interior of the globe. On this principle, volcanic fires would be occasioned whenever these metals were extensively exposed to the action of air and water. Thus, also, the formation of lavas might be explained, as well as that of granites, porphyries, basalts, and many other crystalline rocks, from the slow cooling of the products of combustion or oxidation of these remarkable substances.—*Ure's New System of Geology.*

ELECTRICAL SHOCK FROM A SHEET OF PAPER.—Place an iron japanned tea-tray on a dry, clean beaker-glass, then take a sheet of foolscap writing paper, and hold it close to the fire until all its hygrometric moisture is dissipated, but not so as to scorch it; in this state it is one of the finest electrics we have. Hold one end down on a table with the finger and thumb, and give it about a dozen strokes with a large piece of India rubber from the left to the right, beginning at the top. Now take it up by two of the corners and bring it over the tray, and it will fall down on it like a stone; if one finger be now brought under the tray, a sensible shock will be felt. Now lay a needle on the tray with its point projecting outwards, remove the paper, and a star sign of the negative electricity will be seen, return the paper, and the positive brush will appear. In fact, it forms a very good extemporaneous electrophorus, which will give a spark an inch long, and strong enough to set fire to some combustible bodies, and to exhibit all the electric phenomena not requiring coated surfaces. If four beaker glasses are placed on the floor, and a book laid on them, a person may stand on them insulated; if he then holds the tray vertically, the paper will strongly adhere to it, and sparks may be drawn from any part of his body, or he may draw sparks from any other person, as the case may be; or he may set fire to some inflammable bodies by touching them with a piece of ice.—*Mechanics' Magazine.*

TRAVELLING IN ENGLAND A CENTURY AGO.—In December, 1703, Charles III., King of Spain, slept at Petworth, on his way from Portsmouth to Windsor, and Prince George of Denmark went to meet him there by desire of the queen. The distance from Petworth to Windsor is about forty miles. In the relation of the journey given by one of the prince's attendants, he states:—"We set out at six in the morning, by torchlight, to go to Petworth, and did not get out of the coaches (save only when we were overturned or stuck fast in the mire) till we arrived at our journey's end. 'Twas a hard service for the prince to sit fourteen hours in the coach that day without eating any thing, and passing through the worst ways I ever saw in my life. We were thrown but once indeed in going, but our coach, which was the leading one, and his highness's bodycoach would have suffered very much, if the nimble boors of Sussex had not frequently poised it, or supported it with their shoulders, from Godalming almost to Petworth, and the nearer we approached the duke's house the more inaccessible it seemed to be. The last nine miles of the way cost us six hours' time to conquer them; and indeed we had never done it, if our good master had not several times lent us a pair of horses out of his own coach, whereby we were enabled to trace out the way for him." Afterwards, writing of his departure on the following day from Petworth to Guildford, and thence to Windsor, he says:—"I saw him (the prince) no more, till I found him at supper at Windsor; for there we were overturned (as we had been once before the same morning), and broke our coach; my Lord Delawarre had the same fate, and so had several others."—*Annals of Queen Anne.*

STEAM.—AUSTRIA AND RUSSIA.—A company has been formed in Austria, for the purpose of establishing steam communication on the Danube. This body has been forced to memorialise its government on the subject of the obstacles thrown in the way of their enterprise by the Russian authorities at the mouth of the river. These authorities refuse to allow the mouth of the river to be dragged, as formerly, to prevent the accumulation of sand and mud in the bar; they refuse to allow depots for coals and stores to be formed on islets conveniently situated for the purpose. It is anticipated that the divergence between the cabinets of Vienna and St. Petersburgh will be widened by this irrational procedure of the Russians.

CUTLERY TRADE OF SHEFFIELD.—The name of Rodgers has been so long known throughout the world, that it is thought by some the present house is not the original one. The original Joseph Rodgers is long since dead, leaving four sons, all of whom were men brought up to the wheel, and have lost none of the keen edge of the father; they have increased the business of the house tenfold. Besides enriching themselves, they have added so much to the reputation of Sheffield cutlery, that London cutlery is no more thought of. This is the house that has made a knife with 1,821 blades, valued at 1,000 dollars, and make scissors one dozen to the grain.

GOLD REGION OF VIRGINIA.

We have received a copy of a "Report of the Geological Reconnoissance of the State of Virginia, made under the appointment of the Board of Public Works, by William B. Rogers, Professor of Natural Philosophy in the University of Virginia," and presented to "the House of Delegates" by the President, from which we shall have occasion to quote, selecting from our present number the subject of

THE AURIFEROUS ROCK.

A general examination of this district suggests a variety of problems of a scientific as well as practical nature, which it would be premature at this time to attempt to resolve. The number and extent of the quartz veins is one of the most interesting as well as important features in the geology of this region, and it is greatly to be desired that minute observation be directed to the tracing of these veins through the state as far as practicable; to the determination of the general value of each vein now wrought, as well as the study of the efficacy of the various processes adopted for the purpose of separating the gold from the materials with which it is intermixed. There can be no doubt, that with the means now most commonly in use, a large proportion of the precious metal is lost and thrown out with the gravel from which only the larger masses of the gold have been separated. At one of the mines visited during the reconnoissance, the sand and gravel, after having been twice subjected to the usual process of washing, was found sufficiently productive to yield five dollars a day to each of the two persons who were washing it a third time. In some of the mines more scientific and effectual means, both of conducting the mining operations and the subsequent process for separating the gold, have been introduced, and when these improvements shall have become more generally known, we may hope for much more profitable returns than in many instances have been hitherto obtained. The amazing richness of many of these veins has attracted enterprise to this branch of mining to such an extent, that the exploration of the most promising auriferous veins has of late been very actively and successfully pursued.

In Spottsylvania and the adjacent counties, Orange, Louisa, Fluvanna, and Buckingham, numerous veins have been wrought for some time; from many of which rich returns have been procured, and under improved modes of operation a still larger profit may be expected. Any detailed account of the various workings now in progress would be inappropriate in the present report, even if the state of our knowledge were such as to warrant statements of a positive nature. Some account of the structure, position, and contents of the veins may be introduced as generally applicable to the whole.

The material of the veins is a variegated quartz, sometimes translucent, at others opaque. It is generally of a cellular structure, fractures without much difficulty, and in many instances contains a considerable proportion of water dispersed through its substance. Its surface, recently exposed, displays a variety of tints of brown, purple, and yellow, of such peculiar aspect as to resemble a thin lacquer spread unequally over the rock. The cavities are often filled with a bright yellow ochre, or hydrated per oxide of iron, which generally contains gold in a state of minute division. Sulphuret of iron (pyrites) is another accompanying mineral, which in many mines occurs in considerable quantities. At Morton's mine (Buckingham) it is peculiarly abundant, and there, as in other places, generally contains a portion of combined gold. In the Union mine, near the Rappahannock, some of the auriferous veins consist largely of the pyrites, which here contains so much of the precious metal as to render the extraction of it an object of profit. This pyrites, in all probability, was at some former period more generally diffused throughout all the auriferous veins, and by its decomposition gave rise to the per-oxide of iron, with which the quartz is always more or less imbued, while the gold existing in it was deposited in the cells and fissures of the quartz. *Silver* is occasionally found in connexion with the gold, and the sulphurets of copper and lead have been discovered in a few instances in the auriferous rock.

The rocks forming the boundaries of the auriferous veins vary very much in different localities. Talcose slate, chlorite slate, and a variety of these, abounding in garnets, are the most usual. They are commonly of a soft texture, yielding readily to the blast, and even to the pick or spade sometimes. Instances occur, however, in which the walls of the vein are of such hardness as to greatly increase the expense and difficulty of procuring the ore. Of this a striking example is exhibited in Moreton's mine, where the rock is removed with difficulty even by the blasting process, while at Booker's and some other mines its texture is so rotten that it rather presents the appearance of earth than rock. Veins like the latter, under favourable circumstances, would give rise to what are technically called *deposit mines*, in other words, collections of clay and sand and gravel, enclosing a portion of gold, all which materials have been removed by the action of torrents or streams from their original position in the vein to some adjacent ravine or hollow, in which they have been quietly deposited. The rocks adjacent to the quartz are often auriferous, and in some instances have been found as productive as the quartz itself. Of this several striking instances occur in the mines of Buckingham, and I believe that in many other localities the same condition would be found to exist.

It has already been stated that nearly all the rocks of this region dip steeply to the east, and it is found that the auriferous quartz veins conform in the main to the inclination of the enclosing strata. The quartz is not, however, to be regarded as an interstratified portion of the series, which would imply its cotemporaneous origin with the strata.

The form and position of the veins is rarely such as to justify this view. Instead of lying in uniform thickness between the walls of the adjacent rock, and with surfaces of slight irregularity, we find the auriferous veins in most cases very irregular in their forms, at one point having a thickness of several feet, at another very near to the former, contracting so as only to measure a few inches across. Again, in many cases the vein divides, and the separate portions afterwards unite or send off other branches.

The bounding surfaces, too, instead of being nearly uniform, as in the strata of the neighbouring rocks, are rough and broken, sending off numerous small veins of quartz into the enclosing strata.

In Morton's mines the width varies from seven feet to five or six inches. In Booker's the vein forks, thins, and as frequently widens. At the Union mines on the Rappahannock the breadth varies in some cases from six inches to nearly three feet.

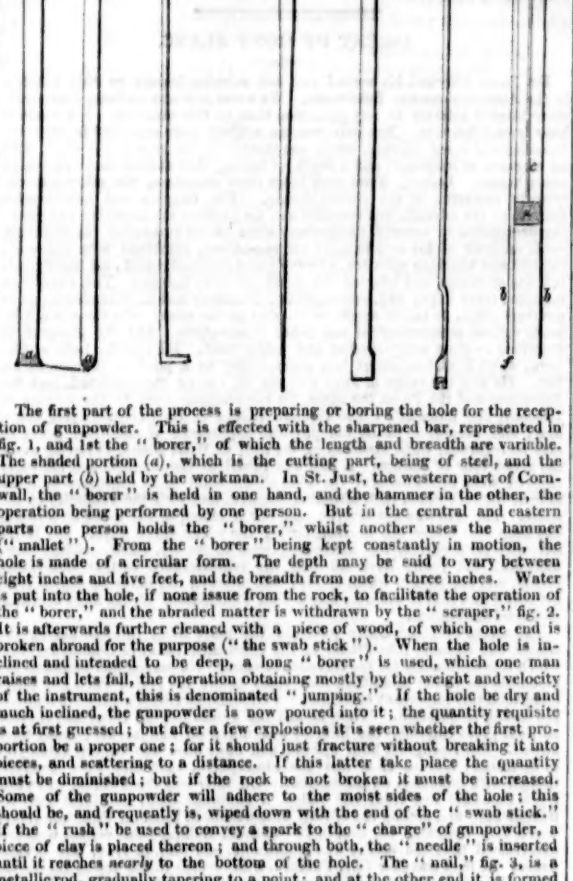
In fact, from the dimensions of the vein at any assumed point, no certain inference can be drawn with regard to its extent at other and remote positions. This irregular structure, while it diminishes confidence in the constancy of a large and fertile vein, at the same time furnishes grounds for continuing the examination and prosecution of one, which by its contraction has become of little or no value, as an enlargement at a small depth beneath, may reveal an abundance of productive rock.

Another fact of some practical importance, and one which, together with those above stated, has a direct bearing upon the question of the origin of the auriferous veins, is this, that although in the main, the dip and direction of the vein conforms with those of the enclosing strata, the correspondence is far from being exact, and, in many instances, while the inclination of the neighbouring strata remains unchanged, that of the vein undergoes very striking alteration. At Morton's mine, already referred to, the dip near the surface is about 20 degrees, while at some depth beneath it becomes forty-five degrees; and similar instances of variation might be adduced by reference to other localities.

It would thus appear that these numerous veins of quartz are not to be regarded as deposits coeval with the regularly stratified rocks among which they are found, since in that case their position and structure would exhibit a like degree of uniformity, but as matter which, subsequent to the production of the neighbouring rocks, was forcibly injected between them by igneous agencies from beneath, rising in the directions of least resistance, and, therefore, generally, though by no means uniformly, following the places of stratification of the rocks through which they passed. Instead, therefore, of considering them as beds like the adjoining strata, as some writers have done, we would incline to class them among *veins of injection*, of which numerous instances occur in other parts of the globe. We are the more persuaded of the correctness of this view of their origin, from the consideration that throughout all the region in which the quartz veins are found, very peculiar modifications in the structure and composition of the surrounding rocks are invariably to be observed—modifications for which no adequate cause can be found in the other igneous rocks which occasionally occur. In the Blue Ridge, the South-west mountain, and in numerous other lines, it may always be remarked, that wherever the modified rocks occur, indicating an igneous action, more or less intense, which has wrought a change in their structure, and induced new arrangements of the ingredients of the rocks, heavy veins of quartz are sure to lie in their immediate vicinity; while, through the body of the rocks themselves, countless minute veins of the same material are seen diverging from the principal mass, and imparting various metamorphic characters to the substances with which they are in contact.

Besides the auriferous veins of the region in which gold occurs, there exist many other veins of quartz agreeing with those which have been found productive in nearly all particulars, save that of containing a valuable proportion of the precious metal. It is highly probable that none of these veins are entirely destitute of gold, and in many instances no doubt the prosecution of the vein would lead to the discovery at other points of it, of an ore sufficiently rich to reward the labour of the extraction. Indeed, it must be looked upon as probable, that the auriferous character, more or less, pervades the quartz veins generally, even as far as their western limit in the Blue Ridge. The striking similarity in the character of them all, and the obvious *contemporaneousness of their origin*, would seem to give great plausibility to this opinion: and if we are to credit the statements of the discovery of gold in the western part of Albemarle, and at one or two other points equally remote from the gold region, as usually defined, we can no longer doubt the propriety of regarding the Blue Ridge as the proper western boundary of the auriferous rocks. A careful investigation of the numerous large quartz veins ranging along the valley between the south-west mountain and Blue Ridge, becomes in this point of view a matter of great importance; and should the auriferous character be found pervading these veins, as is not improbably the fact, the extent and value of the gold region of the state will scarcely have a parallel upon the globe.

ON PRACTICAL MINING.—BLASTING.



The first part of the process is preparing or boring the hole for the reception of gunpowder. This is effected with the sharpened bar, represented in fig. 1, and 1st the "borer," of which the length and breadth are variable. The shaded portion (*a*), which is the cutting part, being of steel, and the upper part (*b*) held by the workman. In St. Just, the western part of Cornwall, the "borer" is held in one hand, and the hammer in the other, the operation being performed by one person. But in the central and eastern parts one person holds the "borer," whilst another uses the hammer ("mallet"). From the "borer" being kept constantly in motion, the hole is made of a circular form. The depth may be said to vary between eight inches and five feet, and the breadth from one to three inches. Water is put into the hole, if none issue from the rock, to facilitate the operation of the "borer," and the abraded matter is withdrawn by the "scraper," fig. 2. It is afterwards further cleaned with a piece of wood, of which one end is broken abroad for the purpose ("the swab stick"). When the hole is inclined and intended to be deep, a long "borer" is used, which one man raises and lets fall, the operation obtaining mostly by the weight and velocity of the instrument, this is denominated "jumping." If the hole be dry and much inclined, the gunpowder is now poured into it; the quantity requisite is at first guessed; but after a few explosions it is seen whether the first proportion be a proper one; for it should just fracture without breaking it into pieces, and scattering to a distance. If this latter take place the quantity must be diminished; but if the rock be not broken it must be increased. Some of the gunpowder will adhere to the moist sides of the hole; this should be, and frequently is, wiped down with the end of the "swab stick." If the "rush" be used to convey a spark to the "charge" of gunpowder, a piece of clay is placed thereon; and through both, the "needle" is inserted until it reaches *nearly* to the bottom of the hole. The "nail," fig. 3, is a metallic rod, gradually tapering to a point; and at the other end it is formed into a bow.

It was formerly made entirely of iron; but latterly, although rather less frequently used, its pointed extremity has been made of copper, as, during its introduction, removal, &c., the iron has caused ignition, and been attended with fatal consequences. On the clay, are put down, and gently beaten with the "*tamping*" or "*ramming*" bar, fig. 4, pieces of some stony substance, which readily yields to the hammers without giving a spark—pieces of roofing tile, soft slate, decomposing porphyry, friable granite, coal, or *solid* copper, are most commonly used. At first a little is put in, and beaten firmly down; then a second small quantity, and so on, a third, fourth, &c., until the hole is filled. It is desirable that each layer should be very thin, as the confining power of the "tamping" is considered to be in proportion to the number of layers, not regarding the thickness of each; of course this is to be understood as within certain limits. The tamping bar is usually made of iron, the lower extremity shod with copper or brass.* The next point is the removal of the "nail," which is done by striking it upward, or by the use of a lever. The "rush" is now to be introduced into the hole left by the "nail;" the pith having been first removed, and its place filled with fine gunpowder. Nothing now remains but the application of fire, which is communicated by the ignition of one end of a piece of coarse paper, smeared with grease; the "snogg," the other end, being placed in contact with the "rush;" the slow combustion affords time for the escape of the workmen.

But ignition of the "charge" is frequently effected by the train being contained in "*a rod of quills*," or by the use of "Bickford's patent safety rods." When either of these is employed, it is placed in the hole before the introduction of the "charge," and in these cases the "nail" is not required. The operations of "tamping" being conducted in every respect as before described. The "rod of quills" is merely a tube of the common goose quill, the smaller end of one quill being inserted in the larger extremity of the other; and so on, until the tube be of the required length, viz. the depth of the hole it is intended to discharge. The gunpowder with which they are to be filled must be bruised to a small size, and should be packed very closely in the tube. The compression to which they are exposed during the hole being "tamped," may be thought to prevent their combustion; but if they be pressed as closely as possible in a smith's vice, it produces no such result.

"The patent safety rod" † is a column of gunpowder enveloped in a series of hempen yarns, twisted spirally round it, and is perfectly flexible. It is about $\frac{1}{3}$ or $\frac{1}{4}$ an inch in diameter, consumes slowly, and rarely becomes extinguished until entirely burnt. The expense of "quills," and of the "safety rods" is about the same, viz. threepence per fathom in length.

The preceding remarks are intended to apply to an *inclined* hole, but when the aperture is nearly *horizontal*, which is frequently the case, the introduction of the "charge" is somewhat more difficult. Some miners make a cartridge or tube of paper, which they cement together with grease; this being filled with gunpowder, is pushed with the "swab stick ‡" to the further extremity of the hole. Others charge with the "fluke," which may be described as the half of a hollow cylinder which has been divided in the line of its axis; this is attached to the end of an iron rod, fig. 5, and is thus not unlike a carpenters' augur or "marrow spoon;" § the "*modus operandi*" is evident. The "tamping" is in all cases alike, and the train may be laid by either of the means already mentioned.

But when the hole is moistened by the entrance of water from the rock, the case is much more difficult, and is accomplished by "*claying*" the hole, or by introducing the "charge" either in a "pitched bag" or a tin-plate "cartridge." "Claying" is merely filling so much of the further end of the hole as the "charge" is intended to occupy, with stiff clay, which is nearly impervious to water. Through this a cylindrical bar (the "claying bar"), usually made of iron, is pushed nearly to the extremity, in order to its making a space for the reception of the "charge," which is at once introduced, the train laid, and the hole "tamped" in the usual manner. This operation requires to be executed with great rapidity, ‖ as the clay, which is not quite waterproof, will become saturated, and the charge, being thereby moistened, will not ignite, and must be removed; a very tedious and irksome task.

The "pitched bag" is a bag made of coarse canvass, and so covered with pitch as to be completely waterproof; the tin-plate "cartridge" is simply a tin case of a cylindrical form. In the "bag" or "cartridge," the "charge" is placed, the train for its ignition being laid through a tin-plate tube of perhaps a quarter of an inch diameter. This receptacle is placed at the further extremity of the hole, sometimes imbedded in clay, and "tamped up" in the usual manner. The "pitched bag" is preferred to the "cartridge," as the latter fits the hole more exactly; and the regular figure of the former retains round it a little air, which as it yields to compressing force, impedes the full effect of the explosion.

Dr. Paris ¶ has proposed an apparatus, which he denominates a "*shifting cartridge*," the invention of Captain Chenhalls, of St. Just, which would appear useful for charging holes of small depth, and has probably not attracted the attention it deserves. Fig. 6† represents a section of the instrument. Dr. Paris says "it consists of a copper cylinder *a b* two feet in length, and one inch in diameter, containing a moveable rod *c* which is graduated in inches, and has affixed to its extremity a leaden plug *d*, the cap *g* is made to take off, in order, at any time, to allow the removal of the rod for cleaning the interior."

Manner of using it.—"Draw out the rod as many inches as you require it to deliver of gunpowder, then invert the instrument, fill it and place a piece of moistened clay at the mouth of the cylinder; it is now to be inserted into the hole, when, by pressing down the sliding rod, the whole charge is immediately delivered in a mass without any loss; before the instrument is withdrawn, the rod should be rammed down smartly, several times upon the mass of gunpowder. In charging "*back holes*" ‡ the clay should be stuck upon the end of the plug *d* previous to the introduction of the powder into the cylinder. When quills are used "for a fuze, in reference to the *needle*, it will be found advantageous to affix in the cylinder a smaller tube for their reception, as represented in the plate *e f*." Dr. Paris might have spared his remarks on the waste of gunpowder in the Cornish mines, in consequence of the ignorance and carelessness of the workmen; for, as that material is paid for by themselves, all the waste is their own loss. It is difficult for any but a practical man to say where a hole may be advantageously placed; and this knowledge is difficult to communicate on paper, beside requiring more place than these observations are intended to occupy.

Nothing but experiment can point to the proper quantity of gunpowder requisite for any given hole; and the London Doctor might have been sparing of his censures § until better acquainted with the facts.

It has frequently been written and said, that sand is a very good and efficient substitute for "tamping;" many experiments have been made on this point, but hitherto without any very positive result. The sand has unquestionably been blown out in many cases; whilst it cannot be denied that, in some instances, the results seemed to be favourable to such a conclusion. Further trials are certainly required to set this important point at rest.

Accidental Explosions, and their causes.—Of premature explosions by far the larger portion may be separated into two classes, viz. 1st, those originating through the "*nail*;" and, 2d, in the "tamping" process. The first class, of course, occurs only when the "rush" is used, and the number of accidents has been considerably diminished by the introduction of a copper point to the "nail;" but even this has not *entirely* prevented them. They are caused, 1st, by the "nail" being driven to the very bottom of the hole, and by its contact there, with substances which by percussion afford a sparkle. 2d. The "nail," during the "tamping," is subject to concussion, which will produce a similar effect to that before mentioned. 3d. The removal of the "nail" will occasion a like result, especially if, at its introduction, it had been so forcibly driven against the bottom as to bend its point. This curved part will occasion considerable agitation in every portion of the contents of the hole, and the danger from *this* cause will not be materially diminished if the "nail" be pointed with copper. But the greater part of the danger will be obviated by putting a small piece of clay on the bottom of the hole before it is charged; and by not pushing the "nail" to the *very* extremity thereof.

2d. The dangers incident on the "tamping" process are mostly in consequence of the gunpowder which, it has been before remarked, adheres to the sides of the hole. Whatever spark may be struck out during the operation will communicate to these and ignite the "charge." Fire may be struck, 1st, by the contact of the "tamping bar," with such portions of the sides of the hole as will afford a spark; 2d, by the action of the same instrument on like portions of "the tamping;" but these, of course, do not occur when the bar is shod with copper or brass. 3d. By the friction of such substances in the "tamping," against similar bodies in the sides of the hole; and, 4th, by the friction of various parts of the "tamping" against one another. The precautions to be used against this class of accidents are, 1st, effectually removing the adhering particles of gunpowder from the sides of the hole; 2d, the use of a "tamping bar" shod with a substance which does not readily strike fire; and, 3d, care in selecting, for "tamping," substances which do not readily afford sparks by impact on one another; a list of the most suitable has been before given.

This last class of explosions occurs, notwithstanding the use of "quills" "and safety rods," their causes being beyond the reach of these contrivances. The workman sometimes fires the "rush" instead of the "snoff." It is said, by certain people, that explosions sometimes occur from the heat expressed by the condensation of air in the hole, from direct impact of the "tamping bar," &c.: to these fooleries it does not seem necessary to make further illusion. It may be observed, that of the fatal accidents of which we so frequently hear, many more appear to be due to the carelessness of the workmen, ¶ than to their ignorance. H.

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* Dr. Paris, says Captain Chenhalls, found an alloy of 86 parts of copper, and 14 of tin, to be the most durable.—*Cornwall Geol. Trans.* I. 89.

† Manufactured by the patentee, Mr. Bickford, of Tucking Mill, near Redruth, Cornwall.

‡ Not with "the iron needle," as Dr. Paris has it.

§ Paris.—*Cornwall Geol. Trans.* I. 93.

‖ One of our first mine agents has often fired holes for his workmen with a piece of clay *only* on the "charge," and with good success.

† All the figures are intended to denote the respective instruments.

‡ "Back holes" are holes nearly horizontal.

§ Cornwall Geol. Trans. I. 82.

¶ Many explosions have originated in want of caution in boring a charge which has not ignited, from the train being extinguished. The "tamping" is, in these cases, removed with the borer, and the workmen take no more care than if they were "*beating down*" a new hole.

FATAL ACCIDENT.—Last week, as five men were sinking a winze in Relistian mine, they had shot a hole; and one of them, named John Branch, descended for the purpose of examining the effect; when, it is thought, he attempted to remove some of the ground round the hole, (which had not properly exploded, but spread through the ground when fired,) when a rush of gas or foul air arose from the broken ground, and filled the winze or shaft branch. He called to those above, who immediately began to haul him up; but when near the top of the winze, his strength being exhausted by the want of a due supply of atmospheric air, he fell out of the slug, and was precipitated to the bottom of the shaft. His father-in-law, Samuel Stephens, then at the top of the winze, seeing what had occurred, went down to his assistance; and not having made any signal to those above, they became alarmed; another man went down, and another followed; but no signal being made by any of the party, Adams, the fifth, and only man then at the top of the winze, anticipating what had occurred, began to pour water down the winze, which had the effect of dispersing the foul air collected. He shortly heard a voice intreating him to continue to pour down water, which he did for some time, till assistance was procured, and the poor fellows brought to the surface, when it was found that John Branch was quite dead, his father-in-law, Samuel Stephens, insensible, and the other two in a very exhausted state. There is no doubt but that all four would have shared the fate of poor Branch, but for their companion's thoughtfulness in pouring down the water. There is some hope of Stephens's recovery; the other two are doing well.—*Cornwall Royal Gazette.*

EXTRAORDINARY ESCAPE.—A few days ago, a person of the name of Moses Simpson was excavating in an iron-stone mine at Cuthorpe, near Chesterfield. In the course of the work, he set what is called a shot to blast part of the rock asunder; he set fire to it, which failed through the dampness of the weather to explode. He went down again to ignite the fuse, but had not landed from the mouth of the pit a moment when it blew up; and large fragments of the stone were hurled up the shaft with such dreadful force as to break in pieces the machinery at the top, and the man thus escaped from being dashed to pieces.—*Doncaster Gazette.*

MELANCHOLY ACCIDENT.—On Saturday last, a young lad of the name of John Bryant fell into the tapping pit of the Cambrian Copper Works, Llanelly, into which the contents of two furnaces had been just deposited; and so dreadfully was he scalded, that in stripping off his clothes, his skin adhered to them, and the flesh actually loosened from the bone; he lingered until Sunday morning, when he expired. An inquest was held on the body, and a verdict of accidental death returned.—*Carmarthen Journal.*

ASTRONOMY.—In his last work on astronomy, Mr. Mudie thus cleverly and simply illustrates the apparent annual motion of the sun:—"Place a table in the middle of the room, and set a candle on the table in such a manner as that the flame shall be nearly on a level with the eye, then retiring a little from the table, but looking at the candle, walk round towards the right hand, and the candle will appear to walk round in the opposite part of the room towards its right hand also; that is, when you are to the north of the candle it will appear to move eastward. While you are moving westward, in this state of things, you have only to suppose that the walls of the room represent the region of the stars, that the candle on the table represents the sun at rest in the centre, as the walls which represent the stars are at rest outwards around, and that you represent the earth in performing its annual motion round the sun."—*Times.*

CARN BREA.

(Continued from No. 31.)

We have already alluded to the growing attachment of the Saxons towards Christianity during the brief period in which the superstition of Thor and Woden had been established in Carn Brea; and observed that this superstition appeared destined to fall before the Christian faith. We now proceed to notice its accomplishment. In the other parts of Britain the Saxons had already conformed to Christianity as practised by the Romans, who, even in that early age, had incumbered it with human appendages. Among these appendages the worship of saints and images bore a conspicuous part; and it has been insinuated that this part of the system so closely resembled the worship of Thor and Woden, as to have mainly contributed to the conversion of the Saxons. We are disposed, however, to attribute their conversion to higher and purer motives. By an impartial attention to historical facts, we can easily discover that the Saxons had contrasted the polished structure of Christianity with their own barbarous superstition, and embraced it, not from any resemblance which it bore to the superstition under which they had long groaned, but from a conviction of its salutary influences and divine origin.

The Cornish Christians, evincing that stubborn independence which appears to be an inherent principle of their minds, refused to put their necks within the Papal yoke. Careful to scrutinize whatever came under their notice, they contented themselves with the plain gospel system, and rejected such appendages as reason, and conscience, and Scripture taught them to disapprove. Driven from Carn Brea, they reared their altars on distant cairns, in distant woods, and beside distant brooks, where they worshipped with all that regularity and decency of demeanour which unaffected piety is sure to inspire. In their intercourse with the Saxons they bore a blameless conversation. Having but little here they parted with it with the less regret, in confident expectation of a future reward. Influenced by the sacred precepts of their faith, they bore their privations with heroic fortitude; yet for one thing they sorrowed, though not without hope—the desecration of Carn Brea. Thus did the faith and practice of the Cornish Christians attract the attention of the Saxons, and insensibly win their regard. Many there were who, lagging behind the march of intellectual and moral improvement, and pluming themselves on having derived their origin from Woden, retained a lingering affection for their ancient superstition; but the great majority evinced the utmost readiness to participate in the blessings of that faith, the healing influences of which they had witnessed on the Christian community, felt an inward gratification at the destruction of that idolatrous worship which they had established on Carn Brea.

We might quote many bright examples in illustration of the benign influence of Christianity on its converts, a few, however must suffice. The Grecians were not a little vain of their mythology, a system embracing gods known and unknown. But Christianity was carried into Mars-hill, and the sages abandoning a feeble though elegant system of philosophy, which failed to give man a hope beyond the grave, they embraced the faith of Jesus and the resurrection. The pagan sons of Romulus had consecrated an almost infinite number of deities, statues, and symbols as objects of their divine adoration. But Christianity found its way into the heart of the Roman empire, and was potent to the overthrow of this extensive system of polycheism. The persecutions of the different emperors served but as arteries to convey this life-blood through the remotest extremities of this extensive system; and ultimately the fact of a Roman emperor becoming a nursing father to the Christian church was witnessed by the world. Of all the superstitions of human invention none has taken a more deadly grasp on the human mind than that of Druidism. We have already witnessed its degrading influence on the ancient Cornish at Carn Brea, and we shudder involuntarily at the recollection. Several other parts of Britain were sunk almost as low under its baneful influence, and were utterly unable to emerge from their degradation. But Christianity dissolved the spell, and the savage tribes of Britain rose so rapidly in the scale of civilization, that they soon stood forward as the rivals of the polished Italians. The Superstition of Thor and Woden had grasped the Saxons almost as firmly as Druidism had the Britons. But Christianity polished their rude manners, it changed the savage barbarians into a civilized people, and under its happy auspices they became the friendly allies of the ancient Britons, and cheerfully and zealously co-operated with the Cornish Christians against the rapacious Danes, who had so treacherously violated their engagements, and so wantonly ravaged Carn Brea.

[To be continued.]

METEOROLOGICAL JOURNAL, 1836.

Aug.	Thermometer	Barometer	Aug.	Thermometer	Barometer
Thursd. 7	from 37 to 49	29,49 to 29,14	Monday 11	.... 37 .. 52	29,64 .. 29,67
Friday.. 8	.... 28 .. 49	29,07 .. 29,17	Tuesday 12	.... 26 .. 55	29,67 .. 29,74
Saturd. 9	.... 35 .. 50	29,24 .. 29,40	Wednes. 13	.... 40 .. 58	29,75 .. 29,72
Sunday 10	.... 32 .. 54	29,46 .. 29,63			

Prevailing winds N.E. S. by W. and W. Except the morning of the 10th, and afternoon of the 11th, generally cloudy, with frequent rain. Rain fallen, .525 of an inch.

Edmonton. CHARLES HENRY ADAMS.

FROM THE LONDON GAZETTE,

Tuesday, April 12.

PARTNERSHIPS DISSOLVED.

R. Cann and H. Martin, Portsea, cement manufacturers—W. Turner, R. Turner, J. Turner, E. R. Turner, and G. Potter, Blackpits, Lancashire, cotton-spinners—W. Mote and C. Mote, King's-cross, cheesemongers—S. W. Browne and J. J. Coulter, Liverpool-street, City, oil and colourmen—J. Whitehurch and R. Randall, Southampton, attorneys—G. Lakeman and T. Kelsey, Hoxton Market-place, cabinet makers—R. Wand and I. Dewhirst, Bradford, Yorkshire, worsted spinners—J. P. Whitehead and E. B. Whitehead, Bilston, Staffordshire, blank tray makers—M. Cooper and R. B. Cooper, Birmingham, spur manufacturers—T. Penn, H. H. Halford, and E. M. Elderton, Sledmore, Worcestershire; so far as regards E. M. Elderton—J. P. Makeham and J. Simmons, Coleman-street, City, straw hat manufacturers—J. Froggatt and J. Formiful, Manchester, sewing cotton manufacturers—A. Mitchelson and W. Hall, South Shields, brewers—A. Booth and G. Yeardley, Sheffield, grocers—E. Hawley and T. Brandon, Penny-fields, Poplar, coal and potato dealers—S. Hibbert, G. Hibbert, and W. Williamson, Draycott, Derbyshire, lace thread manufacturers—T. Tyerman and J. D. Paine, Exchange-buildings—C. H. Hervey, A. J. Hervey, and M. Pearce, Blackheath, schoolmistresses—J. Roberts, jun., and W. Bradbury, Saddleworth, merchants—H. Budd, sen., and H. Budd, jun., Wardour-street, Soho, bricklayers—R. Fernley and A. Wilson, Stockport, cotton spinners—E. Hardy, C. Hardy, and M. A. Hardy, York, turners.

INSOLVENTS.

April 11.—Samuel Hibbert and George Hibbert, Draycott, Derbyshire, cotton doublers.

BANKRUPTS.

Joseph Cox, Bradford, Yorkshire, draper, to surrender April 19, May 24, at the Court of Bankruptcy, Basinghall-street. Solicitor, Mr. Parker, St. Paul's Church-yard; official assignee, Mr. Graham, Copthall-buildings.

John Williams, Strand, tailor, April 19, May 24, at the Court of Bankruptcy, Basinghall-street. Solicitor, Mr. Parker, St. Paul's Church-yard; official assignee, Mr. Whitmore, Basinghall-street.

Peter Green, Stamford-street, Blackfriars, agent, April 19, May 24, at the Court of Bankruptcy, Basinghall-street. Solicitor, Mr. Holmes, Liverpool-street, City; official assignee, Mr. Pennell.

Charles Rickaby, Chalcroft-terrace, Lambeth, auctioneer, April 22, May 24, at the Court of Bankruptcy, Basinghall-street. Solicitor, Mr. Bowden, Great Suffolk-street, Southwark; official assignee, Mr. Belcher.

Thomas Cunnington Matheson, Mansell-street, Minories, ship-owner, April 22, May 24, at the Court of Bankruptcy, Basinghall-street. Solicitor, Mr. Dods, Northumberland-street, Strand; official assignee, Mr. Pennell.

Erwin Smith, Rochester, linen-draper, April 19, May 24, at the Court of Bankruptcy, Basinghall-street. Solicitor, Mr. Warne, Leadenhall-street; official assignee, Mr. Green, Aldermanbury.

Charles Orrah, Huddersfield, draper, April 26, May 24, at the Court of Bankruptcy, Basinghall-street. Solicitor, Mr. Reed, Bread-street, Cheapside; official assignee, Mr. Gibson, Basinghall-street.

Charles Martin and Benjamin Ware, Great Tower-street, wholesale cheesemongers, April 26, May 24, at the Court of Bankruptcy, Basinghall-street. Solicitor, Mr. Hill, Copthall-court, Throgmorton-street; official assignee, Mr. Alsager, King's-arms-buildings, Cornhill.

Charles Walker, Lower Belgrave-place, Pimlico, wharfinger, April 22, May 24, at the Court of Bankruptcy, Basinghall-street. Solicitor, Mr. Trott, Crown-court, Threadneedle-street; official assignee, Mr. Groom, Abchurch-lane.

Arthur Fry, Blackfriars-road, hat manufacturer, April 19, May 24, at the Court of Bankruptcy, Basinghall-street. Solicitor, Mr. Bevan, Castle-court, Budge-row; official assignee, Mr. Johnson, Basinghall-street.

John Heap, Manchester, builder, April 27, May 24, at the Commissioners' Rooms, Manchester. Solicitors, Mr. Hammerton, Todmorden; and Mr. Emmett, New Inn.

Ambrose Gallimore, Stone, Staffordshire, printer, April 27, May 24, at the Crown Inn, Stone. Solicitors, Mr. Barlow, Stone; and Mr. Barker, Gray's Inn-square.

Sarah Belcher, Doncaster, innkeeper, May 7, 24, at the Guildhall, Doncaster. Solicitors, Messrs. Mason and Collinson, Doncaster; and Messrs. Forbes, Hale, and Boys, Ely-place, Holborn. DIVIDENDS.

May 3, E. Baugh, Sloane-street, Chelsea, draper—May 3, W. Mill, Fore-street, woollen-draper—May 3, C. T. Kirby, Crawford-street, Portman-square, lacemanufacturer—May 4, Sir G. Duckett, Bart., Sir F. B. Morland, Bart., and T. T. Bernard, Pall-Mall, bankers—May 4, J. Wilkinson, J. Straith, and R. J. T. Perkin, Leadenhall-street, brokers—May 6, J. Robinson, Birmingham, jobbing smith—May 3, T. Dallow, Birmingham, merchant—May 3, R. Bell, Newcastle-upon-Tyne, merchant—May 9, R. Jackson, Newcastle-upon-Tyne, grocer—May 4, G. Hocknell, Stone, Staffordshire, innkeeper—May 10, M. Dunn, Preston, Lancashire, wine-merchant—May 6, J. Fisher, Great Bridge, Staffordshire, iron-merchant—May 10, G. Goulden, Liverpool, wine and spirit dealer—May 7, G. Maggs, Bristol, linen-draper.

Friday, April 15.

PARTNERSHIPS DISSOLVED.

S. Margerison, D. Peckover, and W. Aldam, Bradford, Yorkshire, worsted-spinners.—T. Armstrong and J. Howell, Brecon, surgeons.—R. Hanson and J. S. Shaw, Ashton-under-Lyne, tea-dealers.—F. Element and W. Briant, jun., College-hill, City, bottled ale and porter merchants.—J. Boreinger and J. Speth, Liverpool, clock-makers.—T. Quaife and R. Luck, Battle, Sussex, farmers.—W. Oldfield and T. Walmsley, Stockport, millers.—C. Green and J. Whitehead, Park-street, Southwark, dyers.—C. H. Stonehouse and A. Crossfield, Newport, Monmouthshire, shipbrokers.—W. Hardman, J. Powell, and E. Hardman, Bury, Lancashire, merchants.—W. P. Barton and C. Hindle, Liverpool, joiners.—I. Dewhurst and R. Wand, Bradford, Yorkshire, worsted-spinners.—G. J. L. Stubbs, W. I. Stubbs, and H. J. Stubbs, Great Portland-street, varnish-manufacturers.—J. G. Lynch and S. Lewis, Mincing-lane, wine-merchants.

INSOLVENT.

April 14, Thomas Ditchburn, White Lion-court, Cornhill, scrivener.

BANKRUPTCY ENLARGED.

Joseph Hadley, Birmingham, bone and horn button-manufacturer, from April 19 to May 10.

BANKRUPTS.

William Ward, Warnford-court, City, merchant, to surrender April 26, May 27, at the Bankrupts' Court. Solicitors, Messrs. Parnther and Fisher, London-street, Fenchurch-street; official assignee, Mr. Alsager, King's Arms-buildings, Cornhill.

James Broadhurst, Norbury, Cheshire, wheelwright, April 26, May 27, at the Commissioners' Rooms, Manchester. Solicitors, Messrs. Coppock and Woollam, Stockport; and Mr. Coppock, Cleveland-row, St. James's.

William Croft, Preston, plumber, May 10, 27, at the Town Hall, Preston. Solicitors, Mr. Noble, Preston; and Messrs Perkins and Frampton, Gray's Inn-square.

William Winterton, Borrowash, Derbyshire, grocer, April 29, May 27, at the King's Head-inn, Derby. Solicitors, Mr. Flewker, Wardwick, Derbyshire; and Mr. Capes, Raymond-buildings, Gray's Inn.

Thomas Allen, Wolverhampton, silversmith, May 6, 27, at the Lion Inn, Wolverhampton. Solicitors, Mr. Robinson, Wolverhampton; and Mr. Capes, Raymond-buildings, Gray's Inn.

Michael Gray, Pocklington Canal Head, Yorkshire, coal-merchant, April 28, May 27, at the George Inn, York. Solicitors, Mr. Leonard, Stonegate, York; and Messrs. Johnson, Son and Wetherall, King's Bench-walk, Temple.

Robert Smart, Flax Bourton, Somersetshire, brewer, April 29, May 27, at the Commercial Rooms, Bristol. Solicitors, Mr. Cornish, Bristol; and Messrs. Poole and Gamlen, Gray's Inn-square.

DIVIDENDS.

May 6, J. Turnbull, J. Forbes, R. A. Crawford, and D. Skeene, Broad-street, City, merchants.—May 6, B. Powis, St. Helen's-place, City, merchant—May 7, J. Smith, Old Broad-street, City, stock-broker.—May 7, G. Heather and E. Argles, St. Ann's-place, Limehouse, mahogany-merchants.—May 9, H. Dodd, Ambleside, Westmoreland, innkeeper.—May 10, A. Jones, Carmarthen, banker.—May 10, T. Gilbert, Birmingham, coal-dealer.—May 10, P. T. Scholes, Oldham, Lancashire, grocer.—May 9, J. Andrew, Wirksworth, Derbyshire, scrivener.—May 10, J. Swettenham, Wirksworth, Derbyshire, scrivener.—May 7, W. Welsh, Liverpool, common brewers.—May 11, A. Woodward, Liverpool, wine-merchant.—May 7, P. Lee, Winchester, scrivener.—May 13, W. Wright, Rougham, Norfolk, horse-dealer.—May 12, T. Chadwick, Crab Eye, Lancashire.

CERTIFICATES to be granted, unless cause be shown to the contrary on or before May 6.

J. Arnell, Edward-street, Hampstead-road, coal-merchant.—R. Drew, Hampstead-road, currier.—C. Flight, St. James's-street, tailor.—G. T. Whittington, New London-street, City, merchant.—J. Stevenson, Bishop Wearmouth, saddler.—N. Richards, London-wall, carpenter.—H. Penfold, Salisbury, linen-draper.—T. Richardson, Leeds, money-scrivener.

COMMERCIAL INTELLIGENCE.

THE COLONIAL MARKETS.—Since Friday last the British Plantation market has presented a very animated appearance; the transactions have been considerable, and the prices generally have advanced fully 1s. per cwt., and have now nearly reached the late high currency; the demand made by the grocers has been great, they being compelled to come into the market, their stock in hand being nearly exhausted; the refiners have also purchased very freely such descriptions as are fit for refining purposes. The purchases for the week are estimated at 3,200 hhds., the prices realised for strong Demerara of good brown quality are 61s. 6d. to 62s., and for Jamaica, Grenada, and other kinds of middling quality, 62s. 6d. to 64s.; good grocery Antigua 65s. to 66s.; fine quality 67s. to 68s. At public sale on Tuesday next 130 casks of new Barbadoes sugar will be brought forward for sale.

Mauritius.—This description has participated in the improvement experienced in the British Plantation market, and the grocers have also been ready purchasers at an advance of 6d. per cwt. A public sale took place on Wednesday, when 5,942 bags were brought forward, the whole sold with much briskness at the above advance; very low brown 51s. to 58s.; good ditto 61s. to 62s.; fine dry white 67s. to 68s. Two public sales are advertised for Tuesday next, consisting of 7,500 bags.

Refined Sugar.—Refined goods have been in more demand, and prices may be stated about 6d. to 1s. higher than this day week; the grocers have been free buyers of lumps from 81s. 6d. to 82s.; goods suitable for exportation have been sought after at better prices. About 300 hhds. of crushed sugar of the Amsterdam make have been disposed of during the week at 41s. 6d.; fine titlers may be quoted at 84s. to 86s.; fine Hamburgh loaves 87s. 6d. to 90s.; double refined 100s. to 105s.; green bastards are still in demand at 52s. to 53s.; British molasses 20s. to 21s.; B. P. West India 25s. to 26s.

COFFEES.—The market for British Plantation coffees has been dull all week, still prices are not lower; of the small quantity brought forward by public auction, about 170 casks only, a small proportion has been sold; medium Jamaica of middling quality brought 92s. to 97s.; middling Demerara 90s. to 92s. 6d.; a large parcel of Ceylon was brought to public sale, consisting of 1,000 bags, but nearly the whole quantity was bought in, there being no buyers at the present prices. Mocha of good quality cannot now be purchased under 78s. to 80s. In foreign kinds the transactions were confined to a few parcels of Brazil by private contract, which were done at from 51s. to 55s. Intelligence from the continental markets states that quiet prevails.

TEAS.—On Wednesday morning the private trade sales commenced at the Commercial Sale Rooms, Mincing-lane; there was a full attendance of the trade; the quantity declared for sale is rather more than 60,000 packages; during the day the demand for fine teas was pretty active, at prices fully as high as those previously realised. By the accounts received from Canton to the 20th of last December, the total supplies this season from China, as compared with the exports from Canton in the previous years, will show a deficiency. At the sales on Thursday and Friday a decided advance in prices took place; a great portion of the quantity brought forward found buyers at an advance upon the prices of the last public sales; the improvement is principally in common Congou and Bohea, the former 2½d. to 3d. higher, the latter 1½d. higher. Bohea 11d.; common Congou 1s. 1½d.; good 1s. 2d. to 1s. 4d.; Twankay 1s. 6d. to 1s. 7d.; Hyson 3s. 2d. to 3s. 6d.; the sale will not conclude till about Wednesday next. The East India Company's declaration for the June sale has been issued, and 4,000,000 lbs. of tea are announced for sale. Of Bohea there are declared 600,000 lbs.; of Congou, Peiune, &c., 2,000,000 lbs.; of Twankey and Hyson skin 700,000 lbs.; and of Hyson 100,000 lbs.

HOPS.—No alteration can be made from last week's currency; the demand is still brisk for the fine descriptions, and owing to the quantity left unsold being small, holders are looking for higher prices.

TALLOW.—There continues to be a brisk demand from the trade for parcels on the spot at 44s. 3d., which price is fully equal to those of last week; but for delivery the market has become extremely dull, and prices have given way from 46s. 3d. down to 45s. 6d., at which price there is much disposition evinced to sell.

SPELTER.—There is very little doing, holders ask 19l. on the spot, and 18l. 5s. for delivery. The arrivals are 27,000 plates.

LIVERPOOL, APRIL 13, 1836.

INDIGO.—A small parcel of Caracca Indigo was sold this day by public auction, consisting of very ordinary qualities, which fetched an advance of 1d. and 1s. on the January currency. The *Bland* has arrived from Calcutta with an assorted cargo; she was reported to have on board 800 to 1000 chests of indigo, it turns out, however, that she has not brought a single package.

CORN EXCHANGE, APRIL 15, 1836.

We have had a good supply of Wheat and Flour this week, and the mealing trade is particularly dull to-day, and from 1s to 2s. per quarter lower than on Monday. Barley is rather cheaper than otherwise, but Beans and Peas are unaltered in value. The arrival of Oats is moderate, and though the trade is dull we cannot quote it lower.

Wheat.... p. Qr.	42s to 58s	Malt..... p. Qr.	50s to 60s	Oats..... p. Qr.	18s to 27s
Rye.....	30s to 34s	Peas.....	32s to 42s	Bran.....	9s to 10s
Barley.....	28s to 37s	Beans.....	36s to 40s	Pollard.....	14s to 20s

Linseed.....	50s to 70s	Coriander Seed	new 10s to 14s per Cwt.
Ditto Cake.....	13l per 1000	Clover Seed.....	red 32s to 62s do
Rapeseed.....	33l to 35l per Last	Ditto.....	white 60s to 82s do.
Ditto Cake.....	5l to 5l 5s. per ton	Mustard Seed, ne. wh.	5s to 7s per Bus
Carraway Seed..	50s to 55s per Cwt.	Ditto.....	brown 4s to 10s do

FLOUR, per Sack.

Town made.....	42s to 48s	Essex & Suffolk, on board....	38s to 42s
Seconds.....	40s to 43s	Norfolk and Stockton.....	36s to 40s

AVERAGE PRICE OF GRAIN, per Quarter.

Wheat	Barley	Oats	Rye	Peans	Peas.
50s. 7d.	32s. 6d.	23s. 1d.	31s. 3d.	33s. 6d.	37s. 4d.
AGGREGATE AVERAGE FOR THE LAST SIX WEEKS.					
45s. 5d.	30s. 3d.	21s. 6d.	30s. 5d.	35s. 2d.	34s. 7d.
DUTY ON FOREIGN CORN.					
41s. 8d.	16s. 10d.	10s. 8d.	24s. 3d.	16s. 9d.	18s. 3d.
Duties on Grains from British Possessions out of Europe.					
5s. 0d.	2s. 6d.	2s. 6d.	3s. 0d.	3s. 0d.	3s. 0d.

SMITHFIELD, FRIDAY, APRIL 15.

This morning's supply of Beef is small, yet there was quite as much as the demand requires. Mutton is also not very brisk in disposal, and has in consequence given way a little. In Veal there is no decline from Monday, but, notwithstanding the quantity at market is very moderate, sales are not very readily effected. Lamb and Pork both maintain their prices, the former with a fair disposal.

To sink the offal—per 8lb.

Beef.....	3s. 0d. 3s. 10d.	Veal.....	0s. 0s. 3s. 6d. 3s. 6d.
Best Down & Polled Mutton....	4s. 6d.	Pork.....	3s. 6d. 0s. 0d. 0s. 0d.
Lamb, 5s. 8d. to 6s. 6d.			

Head of Cattle this day—Beasts, 389; Sheep, 5,380; Calves, 128; Pigs, 272.
Head of Cattle on Monday—Beasts, 2,259; Sheep, 12,630; Calves, 160; Pigs, 329.

NEWGATE AND LEADENHALL.—By the Carcase.

Beef.....	2s. 6d. 3s. 6d. 4s. 2d.	Veal.....	3s. 0d. 4s. 0d. 5s. 0d.
Mutton.....	4s. 0d. 4s. 8d. 5s. 0d.	Pork.....	3s. 4d. 4s. 4d. 5s. 0d.
Lamb, 5s. 8d. to 6s. 8d.			

PORT OF LIVERPOOL.

Number of Vessels, with their amount of tonnage, reported inwards at the Custom House, from the 25th Feb. to the 24th March, 1836.

	British.		Foreign.		Total.	
	Vess.	Tons.	Vess.	Tons.	Vess.	Tons.
Africa	4	1365	1	96	5	1461
Azores	5	414	0	0	5	414
British America	8	2602	0	0	8	2602
Belgium	1	213	7	1140	8	1353
East Indies	8	2785	0	0	8	2785
France	9	1141	0	0	9	1141
Germany	1	180	2	134	3	314
Holland	1	220	1	256	2	476
Isle of Man	31	1127	0	0	31	1127
Jersey	2	205	0	0	2	205
Mediterranean	23	4514	0	0	23	4514
Portugal	7	926	0	0	7	926
Prussia	0	0	0	0	0	0
Russia	6	618	4	952	7	1570
Sweden and Norway	0	0	1	248	1	248
South America	17	4238	0	0	17	4238
Spain	4	435	1	363	5	798
United States	27	10092	48	22718	76	32810
West Indies	23	6051	0	0	23	6051
Ireland—coastways	803	85079	0	0	803	85079
	983	135,514	65	25,902	1049	149,446

PURCHASES OF COPPER ORES AT SWANSEA,

APRIL 6, 1836.

Purchasers.	Mine.	Tons.	Total Tons.	Price.	Amount.	Total Amount.
				£ s. d.	£ s. d.	£ s. d.
No. 2. FREEMAN & Co.	Allihies	35	35	11 5 0	393 15 0	393 15 0
3. P. GRENFELL & SONS.	Cobija	110		19 13 6	2164 5 0	
——	Coare	86		18 3 6	1583 1 0	
——	....	71		18 4 0	1291 4 0	
——	Ballygahan	42		4 19 0	206 16 0	
——	Llandegai	10		13 15 6	137 15 0	
——	....	4		15 12 6	62 10 0	
			323			6204 11 0
4. CROWN COPPER CO.	Knockmahon	48	48	8 19 6	430 16 0	430 16 0
5. NEVILL, SIMS, DAUCE, and Co.	Allihies	26		13 15 6	355 5 0	
	Cobija	109		18 15 6	1977 10 0	
	Coare	21		18 7 6	385 17 6	
——	....	17		25 16 6	439 0 0	
——	Ballymurtagh	46		1 19 0	89 14 0	
			219			3150 5
6. VIVIAN and SONS.	Allihies	37		11 4 6	415 6 6	
	Tigrony	62		7 8 0	488 16 0	
——	Cunnorree	50		5 6 0	265 0 0	
——	....	40		5 4 0	209 0 0	
			189			1347 2 6
7. WILLIAMS, FOSTER & Co.	Allihies	100		11 5 0	1125 0 0	
——	....	47		10 17 6	511 2 6	
——	....	46		10 17 6	500 5 0	
——	....	26		13 15 6	358 3 0	
——	Chili	50		20 13 0	1032 10 0	
——	....	77		18 3 0	1387 11 0	
——	....	30		20 4 6	606 15 0	
——	....	17½		20 7 0	356 2 6	
——	....	43		20 4 6	868 13 0	
——	....	10		20 14 0	207 0 0	
			448½			5964 2 6
8. BENSON, LOGAN & Co.	Cobija	50		18 10 6	926 5 0	
	Ballymurtagh	103		1 18 6	198 5 6	
——	Croneliane	65		3 1 6	199 17 6	
——	Llandegai	4		15 12 6	62 10 0	
			222			1386 18 0
10. Messrs. GLASCOTT and Co.	Allihies	47		10 17 6	511 2 6	
	....	46		10 17 6	500 5 6	
——	....	26		13 15 6	358 3 0	
——	Chili	50		20 13 0	1032 10 0	
——	....	30		20 4 6	606 15 0	
——	....	17½		20 7 0	356 2 6	
			216½			3364 18 0
						23842 6 0

PURCHASES OF COPPER ORES AT REDRUTH,

APRIL 7, 1836.

Purchasers.	Mine.	Tons.	Total Tons.	Per Ton.	Amount.	Total Amount.
				£ s. d.	£ s. d.	£ s. d.
No. 1. MINES ROYAL CO.	Wheal Fortune	16		17 9 6	279 12 0	
	Rospeath	9		9 19 6	89 15 0	
			25			369 7 6
2. ENGLISH COPPER CO.	Carnbrea	57		8 6 6	474 10 6	
	Wheal U. Wood	88		4 4 6	371 16 0	
——	....	34		4 4 6	145 13 0	
——	....	20		9 3 6	183 10 0	
			199			1175 9 6
3. VIVIAN & SONS.	Carnbrea	58		2 18 6	111 3 0	
——	Wheal Bolton	38		6 8 0	243 4 0	
——	....	32		3 14 0	118 8 0	
——	Wheal Virgin	90		5 13 6	506 5 0	
——	....	78		5 7 6	419 5 0	
——	Levant	92		14 3 6	1162 7 0	
——	Relistian	75		6 12 0	486 17 0	
——	Wheal Montague	14½		5 16 6	85 8 4	
——	Wheal Mary	27		4 6 6	116 15 6	
——	Anno Francis	20		2 6 6	46 10 0	
——	Spearn Moor	10		20 15 0	207 15 0	
			504½			3613 18 4
4. FREEMAN & Co.	Rospeath	9		9 19 6	89 15 6	
——	Wheal Tolgus	84		6 14 0	562 16 0	
——	Relistian	43		13 12 6	572 5 0	
——	....	21		11 16 0	247 16 0	
			156			1472 12 6
5. P. GRENFELL & SONS.	Binner Down	40		6 9 0	258 0 0	
——	....	36½		5 19 6	217 3 6	
——	....	32		5 14 6	182 6 0	
——	....	30		5 9 6	173 15 0	
——	Drewalles	7		4 19 0	34 13 0	
——	Wheal Virgin	77		4 14 6	353 16 6	
——	....	42		2 8 6	101 17 0	
——	....	40		12 1 0	482 0 0	
——	Tresavean	119		6 11 0	779 9 0	
——	....	52		7 7 6	393 10 0	
——	Wheal Tolgus	78		4 9 6	349 1 0	
——	Wheal Montagu	14½		5 16 6	85 8 4	
			588			3411 1 4
6. CROWN COPPER CO.	Carnbrea	24		4 0 6	96 12 0	
——	Wheal Fortune	57		7 3 0	407 11 0	
——	....	26½		7 3 0	189 9 6	
——	Tresavean	110		7 10 6	827 15 0	
——	....	43		5 14 0	245 2 0	
——	Wheallieauchamp	47		4 12 0	216 4 0	
——	Wheal Montague	14½		5 16 6	85 8 4	
			322			2067 11 10
7. NEVILLE and Co.	Binner Downs	92		4 12 6	433 4 0	
——	....	40		6 9 0	258 0 0	
——	....	70		5 0 0	360 0 0	
——	....	22		5 14 0	162 8 0	
——	....	40		3 4 6	134 16 0	
——	Drewalles	7		4 19 0	34 13 0	
——	Wheal Tolgus	59		11 10 0	675 0 0	
——	Horland	59		9 15 6	576 14 6	
			389			2764 15 6
8. WILLIAMS, FOSTER & Co.	Carnbrea	464		4 15 0	220 17 6	
——	....	42		9 2 6	382 7 6	
——	....	67		9 12 0	616 0 0	
——	....	61		9 15 6	586 18 6	
——	....	40		7 5 0	440 10 0	
——	Binder Downs	19		19 9 6	364 15 0	
——	Wheal Fortune	264		5 19 0	217 3 6	
——	....	37		5 12 6	240 2 6	
——	....	26½		7 3 0	193 9 6	
——	Wheal Bolton	40		12 8 6	496 8 0	
——	Rospeath	9		9 19 6	89 15 6	
——	Fowey Consols	64		6 14 6	383 2 0	
——	....	106		6 15 0	794 18 0	
——	....	105		6 12 0	693 0 0	
——	Levant	78		18 7 6	1441 6 0	
——	Herland	56		1 12 6	91 0 0	
	Wheal U. Wood		997½			7922 5 6
9. BAWDEN, LOGAN and Co.	....	48		4 5 0	202 0 0	
——	....	60		8 5 6	472 7 6	
——	Wheal Julia	66		4 5 6	282 3 0	
——	Bradley's Ore	54		2 4 6	129 5 0	
			228			1025 13 6
10. GLASCOTT, and Co.	Carnbrea	464		4 15 0	220 17 6	
——	....	43		9 2 6	382 7 6	
——	Wheal Fortune	37		6 12 6	246 12 6	
——	Rospeath	9		9 19 6	89 15 6	
——	Fowey Consols	84		6 14 6	383 5 0	
			169½			1211 6 0
	Total Tons		3215		Total	25039 3 6

PRICES OF STOCKS.

ENGLISH PUBLIC FUNDS.

	Saturday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
Bank Stock, 8 per Cent.	214½ 13¾	214 ½	213¾	....	213 ½	213½
3 per Cent. Red. Anns.	91¼ ⅛	91⅛ ¼	91¼ 1	91 ½	90⅞ 1	91 90⅞
3 per Cent. Consols	92 1⅞	91⅞ 2	92 1⅞	91⅞ ¾	91⅞ ¾	91⅞ ¾
3½ per Cent. Anns. 1818.	....	....	....	99½ ¼	99¼ ½	99½
3 per Cent. Anns. 1726.	....	....	....	....	....	89⅞
3½ per Cent. Red. Anns.	99¼ ⅛	99¼ ⅛	98⅞ 9	99 ⅛	99 8⅞	98⅞ ⅞
New 3½ per Cent. Anns.	100⅛ ¼	100¼ ⅛	100⅛ ¼	100¼ ⅛	100¼ ⅛	100¼ ⅛
New 5 per Cent.	....	....	....	....	....	....
Long Anns. 1860.	16⅛ 1-16	16 1-16	16 1-16	16	16 1-16	15 15-16
Anns. for 30 Years 1859.	15⅞	....	....	15⅞	15⅞	15 13-16
Ditto 1860.	....	16 5-16	.. .	16¼	....	16¼ 3-16
Omnium	....	....	....	....	....	....
India Stock, 10½ per Cent.	....	....	....	....	259 8½	258 9
South Sea Stock, 3½ per Cent.	....	....	....	....	....	....
Ditto Old Ann. 3 per Cent.	89⅞	89⅞	89¼ ½	....	....	....
Ditto New Ann. 3 per Cent.	90⅞	....	90	....	....	....
3 per Cent. Anns. 1751	....	....	....	....	....	....
India Bonds, 2½ per Cent.	8 6 pm	6 8 pm	8 5 pm	7 pm	5 pm	5 7 pm
Exchequer Bills, 1½d. £1000.	21 20 pm	20 22 pm	22 21 pm	19 21 pm	18 20 pm	18 20pm
Ditto £500.	21 20 pm	20 22 pm	22 21 pm	19 21 pm	18 20 pm	18 20 pm
Ditto Small.	21 20 pm	20 22 pm	22 21 pm	19 21 pm	18 20 pm	18 20 pm
Ditto 2d. Com.	....	20 22 pm	....	....	....	20
3 per Cent. Cons. for Account	92	91⅞ 2	91⅞ ¾	92 1⅞	....	....
India Stock Om. for Op. Apr. 14	258¼ ½	259	259 8½	258½	....	....

BANK OF ENGLAND.—TRANSFER BOOKS.

	SHUT.		OPEN.
Bank Stock	Thursday,	March 3, 1836	Thursday, April 14, 1836
3 per Cent. Reduced	Thursday,	March 3, ..	Thursday, April 21, ..
3½ per Cent. Reduced	Friday,	March 4, ..	Thursday, April 21, ..
3½ per Cent. 1818	Friday,	March 4, ..	Friday, April 15, ..
Long Annuities	Wednesday,	March 2, ..	Monday, April 18, ..
Anns. for terms of years	Tuesday,	March 8, ..	Thursday, April 21, ..
Old South Sea Annuities	Friday,	March 4, ..	Wednesda. April 20, ..

FOREIGN STOCKS.

	Saturday.	Monday.	Tuesday.	Wednesday.	Thursday.	Friday.
Austrian, 5 per Cent.	....	....	104½	....	104½	....
Belgian, 5 per Cent.	103⅞	....	....	103⅞ ⅞	....	....
Brazilian	85⅞ 6	86 5½	85¼	85¼	86	85⅞
Ditto, 1829	....	....	....	....	....	....
Buenos Ayres, 6 per Cent.	....	....	....	....	....	....
Cuba, 6 per Cent.	....	....	....	....	....	92
Chilian, 6 per Cent.	....	48½ 9	49	....	48⅞ 9	48½
Colombian, 6 per Cent.	....	....	....	....	28¼	....
Ditto, 1824, ditto	32⅞	32⅞ 3	33 2⅞	33 2⅞	33	....
Danish, 3 per Cent.	76	....	....	....	76 5⅞	....
Dutch, 2½ per Cent.	.. .	....	....	....	....	56⅞
Greek, 5 per Cent.	....	....	....	....	....	....
Ditto, 1825, 5 per Cent.	....	....	....	....	....	....
Mexican, 5 per Cent.	....	....	....	....	....	....
Ditto, deferred do.	....	....	....	....	....	....
Ditto, 1825, 6 per Cent.	....	....	....	....	....	....
Ditto, def. do. 6. per Cent.	....	....	....	....	....	....
Neapolitan, 5 per Cent, 1824	....	....	....	....	....	....
Peruvian, 6 per Cent.	....	....	....	24½	23½ 4	....
Portuguese, 5 per Cent.	84½ 5⅞	85 ½	85¼	85¼	....	....
Ditto, New ditto.	85 4½	84¼ ½	83½ 4½	83⅞ 4	84¼ 3⅞	84 ¼
Ditto, 3 per Cent.	53⅞ 4½	54 ½	53⅞ ½	54 3⅞	54¼ 3¼	54 ¼
Prussian, 4 per Cent.	....	....	....	....	....	....
Russian, 1822, 5 per Cent.	....	....	....	109	....	108⅞
Spanish, 5 per Cent. Consols	46¼ ½	46⅞ 7¼	47⅛ 7	47¼ 6⅞	46 7⅞	47¼ 8½
Ditto, passive	14⅞ ½	14½ ⅞	14⅞ ½	14½ ⅞	14⅞ ⅞	14½ 15
Ditto, deferred	21 ¼	21¼ ½	21⅞	21 ½	21¼ ½	21¼ ½
Dutch, 2½ per Cent.	56⅞ ½	56½ ¼	56¼ ⅞	56½ ⅞	56¼ ⅞	56⅞ ¼
Ditto, per Cent.	101⅞ ⅞	101⅞ ½	101⅞ ⅞	101½ ⅞	101¼ ⅞	101¼ ⅞

FRENCH FUNDS.

	PARIS. April 8.	April 9.	April 11.	April 12.	April 13.	LONDON April 14.
5 per Cent. Ann.	107f.95c.	108f.	107f.95c.	108f.	107f.95c.	107f.75c.
Ex. on Lond. 1 mh.	25f.47½c.	25f.47½c.	25f.47½c.	25f.47½c.	25f.47½c.	25f.60c.
ditto 3 mhs.	25f.32½c.	25f.30c.	25f.32½c.	25f.32½c.	25f.32½c.	
4½ per Cent. Ann.	104f.	103f.				
Exchange						
4 per Cent. Ann.	101f.20c.	101f.20c.	101f.20c.	101f.20c.	100f.75c.	
Exchange						
3 per cent.	82f.	82f.5c.	82f.15c.	82f.5c.	81f.90c.	82f.50c.
Exchange						28f.60c.
Bank Shares	2227f.	2235f.	2250f.	2235f.		

IRISH FUNDS,

April 14, 1836.

Bank Stock		207	Royal Canal Stock	10	0	0	36⅞
Government Debentures	3½ per ct.	91⅞	Patriotic Insurance	4	7	6	
Ditto Stock	3½ per ct.	91 ½	Provin. Bank of Ireland,				
Ditto New	3½ per ct.	99⅞	Hibernian Bank	25	0	0	22½
Ditto ditto, reduced	4 per ct.		Grand Canal Stock				23⅞
Consols	3 per ct.	91½	Mining Co. of Ireland ..				
City Debentures	4 per ct.		City of Dublin Steam Co.	100	0	0	113
Exchequer Bills	2d per diem		Kingstown Railway	60	0	0	83

AMERICAN FUNDS.

Redeemable.	Lond.	America.	Redeemable.	Lond.	America.
New York 6 1837		100 1½	Louisiana 5 1844, 7, 50, 2.	100½	
.. 1845		120	New Missis. 6 1861, 66, 71		
5 1837		100 1½	INCORPORATED BANKS.		
.. 1845		110	Per Cent.		
Pennsylva. 1839, 40, 41		103	United States 7 1836		120
.. 1846		108 9	Louisiana State .. 9 1870	25½	128
.. 1853, 4		107 9	Bank of Louisiana 8 1870	26	129
.. 1856		110	N. Orleans, C. & B.	22⅞	108
.. 1858		111	City Bank		110
.. 1860, 62	102½	113½	New York Life and Trust 5	93	200
.. 1865,	108 ½		Tenese Planters 9	23½	112
Maryland 6 1870	108		Mississippi.. 10	26¼	125
Ohio 6 1850	107	120	Exchange		8

COURSE OF EXCHANGE.

FRIDAY, April 15, 1836.

	Prices printed.	Prices negotiated on 'Change.			Prices Printed.	Prices negotiated on 'Change.	
Amsterdam	12 7	12 6	— —	Seville	36½	—	—
Ditto at Sight	12 5	12 4	— —	Gibraltar, .. p. h. d.	48	—	—
Rotterdam	12 7	12 6	12 6½	Leghorn	47⅞	48	—
Antwerp	12 6	12 5	12 5½	Genoa	25 95	25 82½	— —
Hamburgh Mcs. B.	13 14½	13 13½	13 13⅞	Milan	31	—	—
Altona	13 14½	— —	— —	Venice, .. p. 6 A. L.	47	—	—
Paris, 3 days' sight	25 65	25 50	25 55	Naples	40	40½	—
Ditto	25 95	25 82½	25 87½	Palermo	122½ 04	122⅞	122½
Marseilles	25 95	25 82½	— —	Lisbon	56	56⅞	—
Frankfort on Main	154	153⅞	153½	Oporto	56½	56½	—
Petersburg p. ruble	10	—	—	Rio Janeiro	36	36½	—
Berlin .. cur. doll.	7 3	— —	—	Bahia	26	—	—
Vienna eff .... flo.	10 12	10 11	— —	Buenos Ayres	—	—	—
Trieste ditto	10 12	10 11	10 11½	Dublin	1½	—	—
Madrid	37	37½	37½	Cork	1½	—	—
Cadiz	37	37½	—	Madras	—	—	—
Bilboa	36½	36⅞	—	Calcutta	—	—	—
Barcelona	36½	— —	—				

COAL MARKET, LONDON.

APRIL, 1836.

QUALITY.	PER TON. April 11th. s. d.	13th. s. d.	15th. s. d.	QUALITY.	PER TON. April 11th. s. d.	13th. s. d.	15th. s. d.
Newcastle.				*Newcastle.*			
Adairs	18 6	18 9		Walls End Riddells	20 6	20 6	20 3
Bishop	16 6	16 6		Walls End Old Walker		19 6	19
Burdon Main		19 3		*Sunderland.*			
Chester	17 3	17 3	17 3	Bell's Primrose	17 3	17 3	17
Ellison Main	16			Lambton Primrose	20 6		
Hebburn Main	19 3	19 6		Walls End Braddyll's Hett.	22 3	21 9	21 6
Holywell Main	20 6	20 3	20 3	Walls End Haswell		21 9	
Holywell Reins	16 6		17	Walls End Hetton	22 3	22	21 9
Leaze's Main		16	16	Walls End Lambton	21 9	21 9	21 6
Ordes Redheugh	16 6	16 6	16 6	Walls End Russell's Hett.	22 3	22	
Pontop Stanhope Co.	17 9	17 6		Walls End Russell's Lyons	21	20 9	20 6
Pontop Windsor		17 6	17 6	Walls End Stewart's	21 9		21 6
Russell's High Main	16 6	16 6		*Hartlepool.*			
Shipcote		15 9	15 9	Walls End Hartlepool	22	21 9	21 6
South Pontop	17 9	17 3	16 9	*Stockton.*			
South Hartley	19	19	19	Dixon's Butterknowl	17 3		
Tanfield Moor	21 6	21 3	21 3	Walls End Adelaide		21	20 6
Townley	18 6	18	18 6	Walls End Gordon	21	21	
West Hartley	20 6	20	20	Walls End Lands		16 3	
Willington	20 3			Wall's End South Durham	20 9		20 6
Wylam	19	19		Wall's End St. Helen's Tees	20 9	21	
Walls End Bell & Brown	20 3			W. E. Tees & Land mixed	18 6	17 6	
Walls End Bewicke & Co.	20 6		21	Walls End Tees		21 6	21 3
Walls End Carr and Co.		19 6		Walls End West Hetton	19	19 3	19 3
Walls End Clark and Co.			19 6	*Blyth, Scotch, Welsh and Yorkshire.*			
Walls End Heaton	20 9	20 9	20 6	Best Wigan Cannel	26	26	
Walls End Hilda	20		20 6	Cowpen	19	19	
Walls End Hotspur		20 6		Hartley	20	20 3	
Walls End Killingworth			20 9	Loftus Gate		17	
Walls End Newmarch	19 3	19 6	19 6	Walls End Elgin			21
Walls End Northumberla.	19 6	19 6					
Walls End Peareth			16 6				

Arrived since last week, 70 Vessels.

PRICES OF SHARES.

BRITISH MINES.

No. of Shares.		Amount paid.	Price.	No. of Shares.		Amount paid.	Price.
8,000	Albion Copper	3	1	6,000	Perran Consols	1	1½
4,000	Bissoe Bridge	3	3¼	2,000	Polberou Consols	8	8½ ⅞
5,000	Boringdon Park	1½	2	1,000	Do. New	4	5½
8,000	British Tin	1	1½	6,000	Polbreen	2	3⅞
20,000	British Iron	50	38½	10,000	Rhymney Iron	5	5½ ⅞
6,000	British Copper	3½	5¼	5,000	Redmoor Consolid	2½	4
500	Carn Grey	7	6	10,000	Redruth United	3	1⅞
6,000	Cornwall Gt. Unit.	2	1⅞	10,000	Roche Rock	1½	1½ ⅞
10,000	E. Cornwall Silver	1⅞	4	5,000	S. Wheal Leisure	2	1½ ⅞
5,000	E. Wheal Brothers	½	4½	8,000	St. Hilary	⅞	⅞
2,560	E. Wl. Strawberry	3½	9 10	5,000	Tavistock	2	2½
2,850	English	12½	23	6,000	Trevorgus	2	2¼
1,150	Do. New	4	14½	5,000	Treleigh	1½	1½
10,000	Hibernian	10½	3½	6,000	Tamar Consols	2	3¼
6,000	Hayle Consols	2	2¼	2,000	Wendron	5	5¼
2,000	Kerrow	1	1	3,300	West Cork	50	33
5,000	Kellewerris	1	2	5,000	Wheal Brothers	20	17½ 18
20,000	Min. Co. of Ireland	7	5	9,000	W. Whl. Brothers	2	3½
4,000	New S. Hooe	1	1⅞	5,000	Wh. Harm. & Mont	2	2
1,000	North Consolid.	11	3	10,000	Wheal Falmouth	1	⅞
8,000	North Cornwall	1	1½	3,000	Wheal Gilbert	1	2
1,000	Old Moor	2	1⅞	10,000	West Tresavean	1	⅞

FOREIGN MINES.

4,000	Alten	10½	8½	12,000	Mocaubas & Coc.	22	11½
10,000	Anglo Mexican	100	5½ ⅞	2,000	New Granada	3	
	Do. Subscription	25	5½ 6	1,020	Penoles	12	
2,000	Bolanos	150	135	3,060	Ditto Subscrip.	1½	⅞
10,000	Brazilian Imp.	20	23½	14,582	Rl del Monte, re. / Do. unregister.	54½	21 22
10,000	Bolivar	20	12		Ditto Loan Notes	150	135
10,000	Ditto Scrip	4	6½	2,500	Rio de Anori	3½	4¼
10,000	Candonga	7½	6⅞	11,000	St. John d'el Rey	8	5½
10,000	Cata Branca	6½	8	30,000	United Mexican	40	3½ ⅞
12,000	Cobre Copper	30	30½		Do. Scrip		3¼
8,500	Colombian	55	13½ 14		Do. Subscription	2	
1,500	Ditto New	11	14		Do. New Scrip	5	4½
10,000	Copiapo	12½	18½ ⅞	5,000	Un. Gold	9⅞	14 15
20,000	Gen. Min. Ass.	15	8 9				
6,155	Mexican Comp.	53½	2 3				

RAILWAYS.

2,500	Aylesbury	1	2⅞	5,100	Liverl. & Manchr.	100	255
5,000	Birming. & Derby	5	16½ 17	5,100	Do. ¼ Shares	25	
9,500	Bir. & Gloucester	5	13½	6,375	New Do.	25	
7,500	Bir Bris & Th Junc	1	1⅞ ⅞	12,000	Lond. & Blackwl.	3	3½ ⅞
660	Bolton & Leigh	100	100	20,000	London & Dover	1	⅞ ⅞
	Ditto ¼ Shares	25	25½	20,000	Lond. & Greenw.	20	29⅞ 30
	Bristol & Exeter	2½	7½ 8½	25,000	Lond. & Birming.	50	123
10,000	Calcutta & Saugur	2	3⅞ 4	30,000	Lond. & Graves.	1	0 ⅞
500	Cant. & Whitstbl.	50		20,000	Lond. & Southmp.	15	25½ ⅞
350	Cheltenham	100	7½	45,000	Lon. & Brig. Gibbs	1	⅞ 1
7,500	Chelt. & Gt. West.	2½	6⅞ ¼	10,000	Do. Stephenson	5	20 19
2,000	Clarence	100	45	16,000	Do. Rennie	2	3 ¼
12,000	Coml. Blackwall	2	3		Llanelly	5	2⅞ 4¼
1,600	Crom. & Peak For.	100		12,000	Lond. Grand Jun.	2	4¼
7,000	Croydon	5	6⅞	14,000	Manch. & Chestr	2½	
	Dubl. & Kingst.	60		1,000	Manch. & Oldham	3	
800	Durham Junc.	10		10,000	Manch. & Leeds	5	22⅞ 3
1,200	Edinb. & Dalkeith	50	74	10,000	Manch. & S. Union	2	5
5,000	Edin Leith & Newh	1	3⅞ 4	6,000	Midland Counties	5	15
13,000	Edinb. & Glasgow	2	7½ ½	553	Monmouth	3	
60,000	Eastern Counties	1	1⅞ 2	3,000	Newcastle & Carl.	100	
2,500	Forest of Dean	50	28	12,000	North Midland	5	14 15
1,380	Falkirk & Glasgow	3	5 4½		Northn. & Eastrn.	3	3⅞ 4
2,800	Glasgow & Falkirk	3		600	Preston & Longr.	2	3 4
10,400	Grand Junction	40	107	2,600	Preston & Wyre	3	12½
	Gt. N. of England	2	5½	1,500	Stanhope & Tyne	100	
	Great Northern	2	2½ ½	1,000	Stockn. & Daring.	100	
25,000	Great Western	10	38 6		South Durham	2½	5 4⅞
2,000	Hartlepool	100	80	28,000	South Eastern	2	8⅞ 9
3,500	Hudders. & Leeds	2		40,000	South Western	1	1⅞ ½
2,100	Hull and Selby	5	12 ¼	5,300	Warring. & Newt	100	
	St. Helens & R.G.	100		6,600	Victoria	1	3 2
250	Ken. & Leigh Jun.	100		6,000	York & Nr. Midl.	1	5¼

CANALS.

1,760	Ash. & Oldh 97l. 18s.		162	550	Lisk. & Looe Un.	25	
1,482	Ashby-de-la-Zch	113	65	70	Loughboro' 142l. 17s.		1250
720	Barnsley	160	275		Man., Bol. & Bury	48	
1,260	Basingstoke	100	5½	2,409	Monmouthshire	100	182
1,005	Breckn. & Aberg.	150	90	700	Montgomerysh.	100	100
4,000½	Birming. 1-16 Sh.	79½	206	250	Melton Mowbray	100	200
4,000	Do. & Liver. Jun.	100	30½	500	Mersey & Irwell	100	580
477	Bolton & Bury	250		8,000	Macclesfield	100	54
600	Bridgw & Tauntn	100		247	Neath	100	325
400	Chelmer & Blckw.	100	102	100	Nene Navig. Bds.	100	
16,000	Carlisle	21½		1,786	Oxford	100	580
500	Coventry	100	800	522	Oakham	130	38
1,500	Chesterfield			2,400	Peak Forest	78	104
460	Cromford	100	300	2,520	Portsm. & Arundel	50	
4,546	Croydon 31l. 2s. 10d.		3	21,418	Regent .. 33l. 16s. 8d.		16½
11,810	Do. Bonds			5,669	Rochdale	85	120
20,000	Danube & Mayne	12½	7½ ½	500	Shropshire	125	140
2,060⅞	Dudley	100	78	800	Somerset Coal	150	160
600	Derby	100	120	45,000	Do. Lock Fnd St.	12½	11½
	Edin. & Glasg Un.	50		700	Stafrd. & Worces.	140	690
	Do. Allocated	96		500	Shrewsbury	125	245
3,575⅞	Ellesmere & Ches.	133	84	300	Stourbridge	145	263
231	Erewash	100	400	3,647	Strat.-on-Av. 79l. 9 8		42½
1,297	Forth & Clyde 400 16s.		590	200	Stroudwater	150	550
11,000	Grand Junction	100	220	533	Swansea	100	215
2,849½	Grand Union	100	25	3,762	Sev. & Wye & Rail	35	17½
1,521	Grand Surrey	100		1,300	Thams & Sev. blk	100	29½
120,000	Do. (optional) Ln.	100	75	1,150	Do. Do. red	100	32½
3,096	Gr. Western	100	19	2,600½	Trn. & Mer. ½ Sh	100	600
600	Glamorg. 172l. 13s. 4d.		230	350	Tavistock (min.)	100	
1,960	Glouces. & Berkly	100	14½	8,149	Ths. & Med. 19l. 5s. 8d.		2
269	Do. (optnl.) Notes	60		3,344	Do. New		
749	Grantham	150	202		Thames & Isis.		
6,238	Hudderfield 57l. 6s. 6d.		31½	1,000	1,000½ War. & Bir.	100	276
100	Kensington	100	10	980	Warw. & Napton	100	216
25,328	Ken & Av 39l. 18s. 10d.		19½	6,000	Worces. & Bir. 78l. 8s.		82
11,699½	Lancaster	47½	25	5,000	Wilts & Bks, 67l. 10 8		18½
2,897⅞	Leeds & Liverpl.	100	510	800	Wyrley & Essing.	125	75
545	Leicester	140	149	126	Wisbeach	105	45
907	Leices. & Northmp	83½	78	905	Wey and Arun.	110	22½

DOCKS.

2,000 & 1,065½	Commrl.	100	57	570	Folkestone Harb	50	
498,667	East India .... Stock		105	15,000	Ditto Bonds		
1,038	East Country	100		1,352,752	St. Katharine .. Stock		88½
3,238,310	London .... Stock		58½	500,000	Ditto Bonds		104
	Ditto Bonds			200,000	Do. Bonds for 10 yrs.		101⅞
1,380,000	West India .... Stock		107		Shoreham Harb.		23
2,209	Bristol .... 147l. 9s.			2,500	Deptford Pier	3	2⅞
68,324	Ditto Notes		116	1,000	Herne Bay Pier		

ASSURANCE COMPANIES.

2,000	Albion	50	78	100,000	Insur. Co. of Scot.	10	7½
50,000	Alliance Br. & For	10	12½	2,020	Kent Fire	50	92
50,000	Do. Marine	5	5½		Do. Life		79
24,000	Atlas	5	14½	10,000	Law Life	10	28
12,000½	Birminghm Fire	55	105		Liverp. Mar. Ass.	25	
20,000	British Fire	50	40	3,900	Lond. Fire, ex. d.	12½	14⅞
12,000	British Comercl.	5	6½	31,000	London Ship	12½	14⅞
1,000	Caledonian Fire	10	15	50,000	North British	10	15
5,000	Cler. M. & G. Life	2½	3⅞	30,000	Palladium Life	2	2⅞
4,000	County	10		250,000	Protector Fire	2	1⅞
40,000	Eagle	5	6	50,000	Protector Life	1	
200	Economic Life	250	375	2,600	Provident Life	10	19½
50,000	Edinburgh Life	10		100,000	Rock Life	2	7½
2,271	European Life	20	22	689,220	Royal Ex. Stock,		202
50,000	Ditto New	2		250,000	Scottish Union	1	1½
1,000,000	Globe .... Stock		159		Sun		210
20,000	Guardian	20	37	1,500	Union	20	
7,500	Hercules	10	15	6,000	University Life	5	5¼
40,000	Hope	5	6½	50,000	United King. Life	2	
2,400	Imperial Fire	50	120	50	Westminstr. Life	1000	
7,500	Imperial Life	10	10	100,000	West of Scotland	10	
13,458	Indem. Mar. 5l. 13s. 6d.		17				

GAS LIGHT AND COKE COMPANIES.

10,000	Alliance	1	1	20,000	Greenw Railw Gas	10s.	
500	Bath	16		10,000	Imperial	50	43
600	Bradford	25		85,000	Do. Bonds .... 100l.		
5,000	British	16	22½	1,200	Ipswich	10	
5,000	Do. Provincial	19	24	800	Isle of Thanet	20	19½
844	Birmingham	50	105	2,350	Independent	30	48
2,400	Birm. & Staffords	50	92	240	Leicester	50	
600	Brentford	50	30	750	Leith Coal Gas	20	35
4,250	Bristol	20		500	Liverpool .. 242l. 18s.		310
1,500	Brighton	20	14		Do. N. Gas & Coke	100	
750	Do. New	18	11⅞		Do. (New Do.)	60	
2,471	Brighton, Genrl.	20	19	200	Maidstone	50	100
363	Carlisle	25		9,000	Phœnix	30	23
4,000	Continent, Cons.	62½	97	579	Portsea	53	
240	Canterbury	50	60	304	Poplar	50	
	Chelmsford	50	42	1,000	Ratcliff	80	65
300	Cheltenham	50	75	480	Rochdale	15	
1,000	City of London	100	185	4,000	South Metropol.	17½	17
1,000	Do. New	60	115	1,600	Sheffield	16½	
800	Coventry	25	25	1,000	Shrewsbury	10	
200	Derby	50		120	Swansea	50	
180	Dover	50		8,200	Unit. Genl. ex. d.	46	38
600	Dudley	20	21½	240	Warwick	50	50
4,500	Edinbro' Coal Gas	25	65	400	Wakefield	25	22½
	Edinbro' & Alloa	14		750	Warrington	20	22½
240	Exeter	50		12,000	Westms. Chartd.	50	50½
4,000	Equitable	40	31	6,000	Ditto New	10	10
10,000	European	5		800	Yarmouth	18	9
4,400	Glasgow	25	58 60				

PRICES OF SHARES—*continued.*

JOINT STOCK BANKS.

No. of Shares.		Amount paid.	Price.	No. of Shares.		Amount paid.	Price.
10,000	Agricul. of Ireland	5	6	18,000	Lond. & Westmr.	20	25⅞ 7
5,000	Australasia	40	59	3,000	Lancaster	20	30
1,500,000	Bank of Scotland	83½	204	25,000	Liverpool	10	22
10,000	Bank of Birming.	10	13	50,000	Manch. & Liv. Dis.	15	22
10,000	Birmingham Bk.	5	14	20,000	Manchester	25	
500,000	British Linen Co.	100	240	5,000,000	National Scotland	10	15
3,000,000	Commercial	100	176	20,000	Nat. Bnk. Ireland	10	15½
3,000	Equitable Ln. Co.	9	10	10,000	Nat. Prov. Engl.	25	29 ½
2,000,000	Glasgow Union	50	60	1,0000	Nor. & Cnt. B. of En	10	17
10,000	Gloucestershire	7½	15	20,001	Prov. Bk. of Irel.	25	43 ⅞
5,000	Halifax	5		2,000,000	Royal of Scotland	100	170
6,000	Hampshire	5	8½ 9		South African	6	7⅞ 8
5,000	Huddersfield	20		4,000,000	Western of Scotl.	30	35 6
10,000	Hibernian	25		20,008	Wilts & Dorset	5	8

BRIDGES.

1,600	Hammersmith	50	23	5,000	Waterloo	100	2⅞
7,231	Southw. old 63l. 2s. 8d.		2	5,000	Do. old Ann. of 8l.	60	24
1,700	Do. New of 7½ p. ct.	50	14	5,000	Do. new do. of 7l.	40	23½ 24
6,000	Vauxhall 70l. 10s. 3d.		22	6,000	Metropol. Suspen.	2	2½

WATER WORKS.

4,800	Birmingham	25	26	1,500	Nw. Riv. London B. W. An.		58
121	Colchester	100		6,486	Manch. & Salford	100	52
4,433	East London	100	128	800	Portsea Island	50	
4,000	Glasgow	50		1,500	Portsm. & Farlgtn.	50	4
4,500	Grand Junction	41⅞	51½	390	Do. New	50	24
5,400	Edin. Joint Stock	25	35	1,000	Vauxh. lt S. Lon.	100	84
2,000	Kent	100	46	8,300	W. Middx 63l. 12s. 9d.		76 ½
388	Liverpool Bootle	220	310	1,360	York Buildings	100	35½

ROADS.

533	Archw. & Kent Tn.	30		492	Great Dover Str.	70	
300	Barking	100	22½	2,393	Highgte Arch. 30l. 8s.		2½
1,000	Commercial	100	90	11,601½	New North Rd. Stock		
2,000	Do. E. I. Dock Br.	100	59				

LITERARY INSTITUTIONS.

	Adel. Gal. of Sci.	50		700	Russell	26½	8
1,000	Lon. with Br. Tck	78⅞	20½		King's College	100	30
1,500	London Univers.	100	25				

MISCELLANEOUS.

10,000	Anglo Mex. Min.	10		10,000	Ed. & Leith Glass	16	7 8
10,000	Australian Agric.	26½	41	2,500	Essex Mar. Salt	6l.	
1,080	Auction Mart	50		15,000	Gen. St. Nav. e. d.	13	24½ 5
8,600	Br. Rock & Pat. Slt	35			Huds. Bay St. e. d.		
	British Annuity	50		2,000	Lon. Cm. Sal Rms	75	
	British Alkali		17 pm		New Corn Ex.		
6,000	Brit Amr. Ld. Co.	13	11		N. Bruns. (Land)	22	19½
10,000	Canada Comp.	22	39		Mexican, &c.	4	
200,000	Up. Canada Loan			12,000	Pat. Purif. Sea Wat.	2	
	Carron Iron Co.	250		10,000	Rio Doce	2	
	City Bonds, 4 pct.	104	103	2,754	Rever. Inter. So.	100	132 3
	Cent. Amr. (Land)	20	17 ½	2,633	Ditto New	55	72½ ½
75	Cov. Gar. Th. Rnt	500		2,000	Shotts Iron Fo.	38	24 5
300	Drury Lane do.	500		4,000	Thames Tunnel	50	
2,122	Do. Proprietors	100		10,000	Van Diemans Ld	17	14

PRICES OF SHARES AT LIVERPOOL.

		£	s.	d.			£	s.	d.
Liverpool Coal Gas		350	0	0	London and Birmingh. do.	50	126	0	0
Liverpool New Gas & Coke Company	£100	170	0	0	Birming. & Gloucester do.	5	14	10	0
Liverp. New Shares, prem.	60	120	0	0	Manchester and Leeds do.	5	22	0	0
Liverp. & Har. W. Works		465	0	0	North Midland ditto	5	15	10	0
Bootle ditto		310	0	0	Midland ditto	5	10	0	0
Exchange Buildings		168	0	0	Bank of Liverpool	10	27	10	0
Liverp. & Manch. Railway	100	285	0	0	Bank of Manchester	25	36	0	0
Ditto Old Quarters	25	70	5	0	Manchester and Liverpool District Bank	15	22	0	0
Ditto New Quarters	25	70	0	0	Commercial Bank of Liver.	10	25	0	0
Stockton and Darlington	100	298	0	0	Liverp. Marine Assur. Co.	25	16	0	0
Bolton and Leigh ditto	100	90	0	0	Oldh. Gas Lt. & Wat. Works				
Ditto	28	22	10	0	Manch. Fire & L. Assur. Co.				
Warrington & Newton do.	100	177	0	0	Ocean Assurance Company	10	10	0	0
Kenyon and Leigh ditto	100	110	0	0	Northern & Central Bank				
Wigan Branch ditto		70	10	0	of England	10	17	0	0
Preston and Wigan North Union Line ditto	100	125	0	0	Union Bank of Liverpool	10	18	10	0
St. Helens and Runcorn					Commercial Bank of Engl.	5			
Gap ditto	100	36	0	0	West Tresavean	1			
					Killewerris Copper and Tin	1			
Leicester & Swanning. do.	50	60	0	0	Lond. & Bright. (Rennie's)	2	4	0	0
Manchest. Bolton, & Bury					Ditto (Stephenson's)	5	18	0	0
Railway and Canal	48	84	0	0	Great Western Railway	10	39	0	0
Grand Junction ditto	40	117	0	0	Wh. Harmony & Montague				
Wilts and Dorset					Birkenhead Ferry		18	0	0

PRICES OF SHARES AT BIRMINGHAM.

BANKING COMPANIES.	£	s.	£	s.	d.	RAILWAYS.	£	s.	£	s.	d.
Birming. Banking Co.	5	0	17	0	0	Great Northern	2	0	2	15	0
Bank of Birmingham	10	0	15	5	0	North Midland	5	0	16	5	0
Commer. Bank of Engl.	5	0	6	10	0	Midland Counties	2	0	10	0	0
Northern and Central	10	0	16	0	0	Chelten. & Gt. Western	2	10	6	0	0
National Provincial	25	0	26	0	0	Leeds and Manchester	5	0	20	15	0
Dudley & Westbromw.	5	0	10	0	0	Lond. & Bright. (Steph.)	5	0	20	0	0
Stoubridge & Kidderm.	5	0	10	5	0	Grand Connexion	1	0	5	0	0
Wolverhampton	5	0	10	7	6	Bir. Bris. & Tham. Junc.	1	10	2	0	0
Warwick & Leamington	5	0	8	0	0	Eastern Counties	1	0	1	15	0
Derby	5	0	7	0	0	London & Southampton	15	0	24	5	0
Leicester	15	0	22	5	0	Manchest. South Union	2	0	6	2	6
Gloucester	7	10	15	0	0	Northern and Eastern	3	0	4	5	0
CANALS.						South Eastern	2	0	7	5	0
Birmingham, ⅛th share	17	10	255	0	0	London & Greenwich	20	0	28	15	0
Birming. & Liver. Junct.	100	0	29	0	0	GAS COMPANIES.					
Worcester & Birmingh.	78	8	81	0	0	Birmingham	50	0	100	0	0
Warwick & Birmingh.	100	0	275	0	0	Do. and Staffordshire	50	0	82	0	0
Warwick and Napton	100	0	219	0	0	Dudley	20	0	22	0	0
Dudley	100	0	79	0	0	Wolverhampton	20	0	45	0	0
Staffords. & Worcesters.	140	0	703	0	0	Birming. Equitable Gas	0	10	3	0	0
Stratford-on-Avon	79	10	42	0	0	MISCELLANEOUS.					
RAILWAYS.						Birmingh. Water Works	25	0	26	0	0
London & Birmingham	50	0	123	0	0	Birmingham Fire Office	220	0	425	0	0
Grand Junction	40	0	108	0	0	District Fire Office	2	0	2	0	0
Gloucester & Birming.	5	0	12	15	0	Broad-street Brewery	25	0	32	0	0
Dudley & Wolverhamp.	2	10	3	7	6	Warstone-lane Brewery	5	0	4	5	0
Birmingham & Derby	5	0	16	10	0	Birmingham Cemetery	6	0	8	0	0
Great Western	10	0	37	0	0	Bloomfield Coal	21	0	11	0	0
Bristol and Exeter	2	10	8	10	0	Newhall Coal	50	0	1	10	0
Manchester & Liverpl.	100	0	250	0	0	Lond. Steam Carr. Comp.	2	0	1	15	0

PRICES OF METALS.

	£	s.	d.			£	s.	d.
Copper, Brit. Cakes, ton 103 to	105	0	0	Tin in Bars		5	7	0
Sheets .... lb.	0	1	0	Grain Blocks		5	18	0
Bottoms	0	1	1	Broken		6	3	0
S. American	0	0	0	Banca .. bd. .. cwt 4l. 10s. to		4	15	0
Iron, British, Pigs	8	0	0	Straits		4	8	0
Bars .... ton	12	0	0	Plate, per box of 225 sheets		0	0	0
Bolts and Rods	12	0	0	No. I. C 13⅞ by 10 inches		2	4	0
Hoops	14	0	0	I. X		2	10	0
Plate	15	0	0	I. XX	161	2	16	0
Cargo at Cardiff	10	0	0	IXXX	182lb.	3	2	0
Foreign bd. C.C.N.D.	18	10	0	IXXXX	203	3	8	0
P.S.I.	14	10	0	No. II. C. 13⅞ by 9⅞ in.	105	2	2	0
Swedish .... 14 10 to	15	0	0	II. X.	133	2	8	0
Lead, British .... ton				No. III. C 12⅞ by 9⅞ in.	98	2	0	0
Pigs .... ton 27 10 0 to	28	0	0	III. X	126	2	6	0
Sheet milled ton 28 10 0 to	29	0	0	Sm. Dbl. { SDC } 15 by 11	167	3	6	0
Bars	26	10	0	SDX } 200 sheets	188	3	2	0
Shot, Pat. 1 to 5	27	10	0	SDXX	209	3	18	0
6 to 12	27	10	0	SDXXX	230	4	4	0
Red or Minium	26	10	0	SDXXXX	251	4	10	0
White	30	0	0	Dbl. { C .. 16⅞ by 12½ inches	98	2	0	0
Litharge	27	10	0	X .... 100 sheets	126	2	6	0
Pig Spanish .... ton	27	0	0	XX	147	2	12	0
Steel, Milan .... bd	35	0	0	XXX	168	2	18	0
Swedish, bd.	18	10	0	XXXX	189	3	4	0
Tin in Blocks .... cwt	5	5	0	Taggers, 14 in. by 10. 450s.	—	0	0	0
Ingots	5	6	0					

Wasters of No. I. C, No. I. X, and No. I. XX, 3s. per box less than perfect plates; all other sorts of Wasters 6s. per box less. Duty and shipping charges 6d. per box.

Spelter .... ton	19 0 0	to 0 0 0	2s. cwt.
Sheathing	31 0 0	— 0 0 0	10s.
Platina Ore oz.	0 10 6	— 0 0 0	5 per cent.

TIDE TABLE.

HIGH WATER AT LONDON BRIDGE, from April 16 to April 22.

	Satur.	Sunday.	Mond.	Tuesd.	Wedn.	Thurs.	Friday.
Morning	2 24	2 55	3 24	3 54	4 29	4 57	5 31
Afternoon	2 40	3 10	3 39	4 10	4 41	5 13	5 51

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